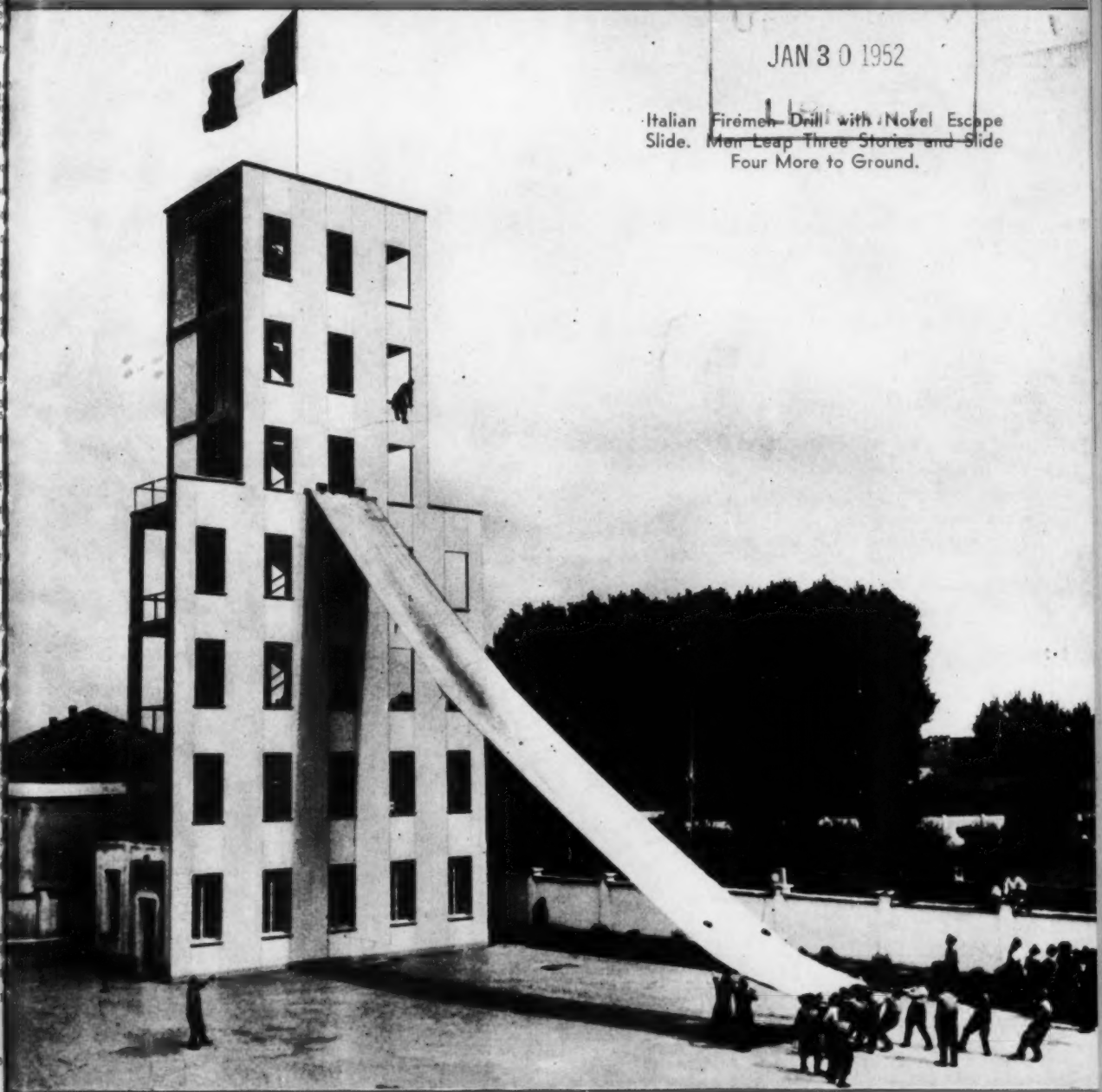
FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

JANUARY, 1952

OHIO STATE
JAN 30 1952

Italian Firemen Drill with Novel Escape Slide. Men Leap Three Stories and Slide Four More to Ground.



A CASE - SHEPPERD - MANN PUBLICATION

For COMMON BREATHING ACCIDENTS and for CIVILIAN DEFENSE

is Your Community protected

by the MOST EFFECTIVE Resuscitation apparatus known to science?

EMERSON RESUSCITATORS

SIMPLE to operate, with no complicated adjustments.

SAFE for adults, children, or infants. There is no record of lung injury from the pressures used in thousands of cases in more than ten years.

EFFECTIVE. The suction phase, alternating with the positive phase, helps circulation and can be of life-and-death importance, especially to victims in shock.

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Information and Demonstration

Bulletin on a New Manual Method of Artificial Respiration

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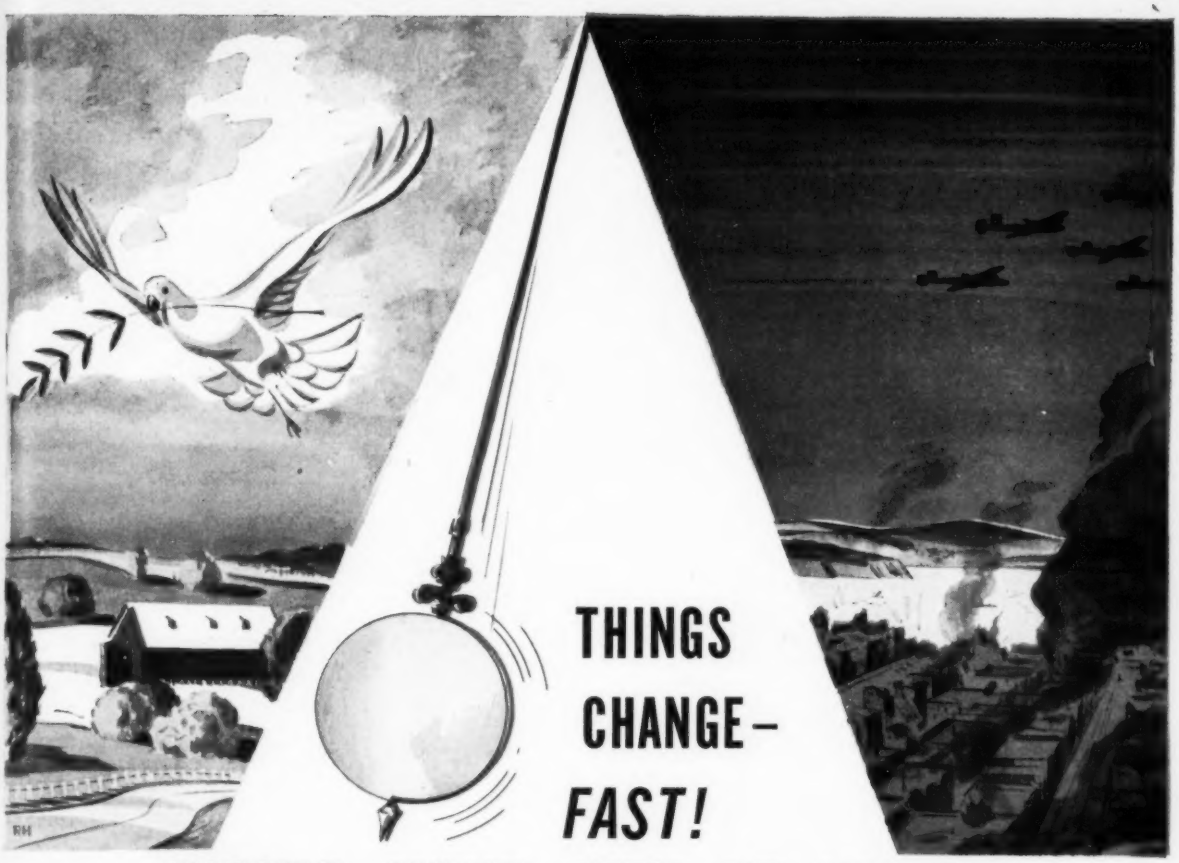

WOULD YOUR CITY BE READY?

We all fervently hope you will never need to use an air-raid warning system in your community; but what if the international picture changed overnight? Could you get a warning system up in time? Would it do the job? Could you train your population in its meaning?

You can resolve these vital questions now by calling in your Federal representative. He can help you scientifically plan a warning system for your specific needs and at far more reasonable cost than a rushed, makeshift system you'd have to buy at a premium. He can show you how you can coordinate your activities with the government Civil Defense program and its available funds for municipalities.

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING, THE FIRE ENGINEER, FIRE PROTECTION *and* FIRE SERVICE

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FRED SHEPPERD
Editor

ROI B. WOOLLEY
Assistant Editor

Our 75th Year

WITH this issue, FIRE ENGINEERING begins its 75th year as the Journal of the Fire Fighting Profession—three-quarters of a century as chronicler, reporter, recorder and prophesier for what we firmly believe to be the most important of all essential public services—*the Fire Service.*

● It's been a busy, active three-quarters of a century. But come war, peace, prosperity or recession, FIRE ENGINEERING, like the Fire Service, has weathered it all—and today is at its strongest point in all its long history.

● In 1951 the American people produced more, saved more, spent more than in any other year in our history. But history also records the doubts and fears, the stresses and strains of the times—and the obstacles under which the Fire Service has labored—and is laboring.

● Indeed, this 75th year of our history opens on fateful days. The nation's very political and economic future is at stake. And every shift in the times has its impact on the Fire Service and on our vast and growing family of readers and advertisers.

● During this Anniversary Year it shall be our continued endeavor to record these shifts and changes—and the progress of the Fire Service, come war or peace. To readers and advertisers alike we pledge a continuation of those policies, plans and programs which have won for FIRE ENGINEERING that enthusiastic acceptance as "The Journal of the Fire Fighting Profession Since 1877."

The Publishers

FIRE ENGINEERING

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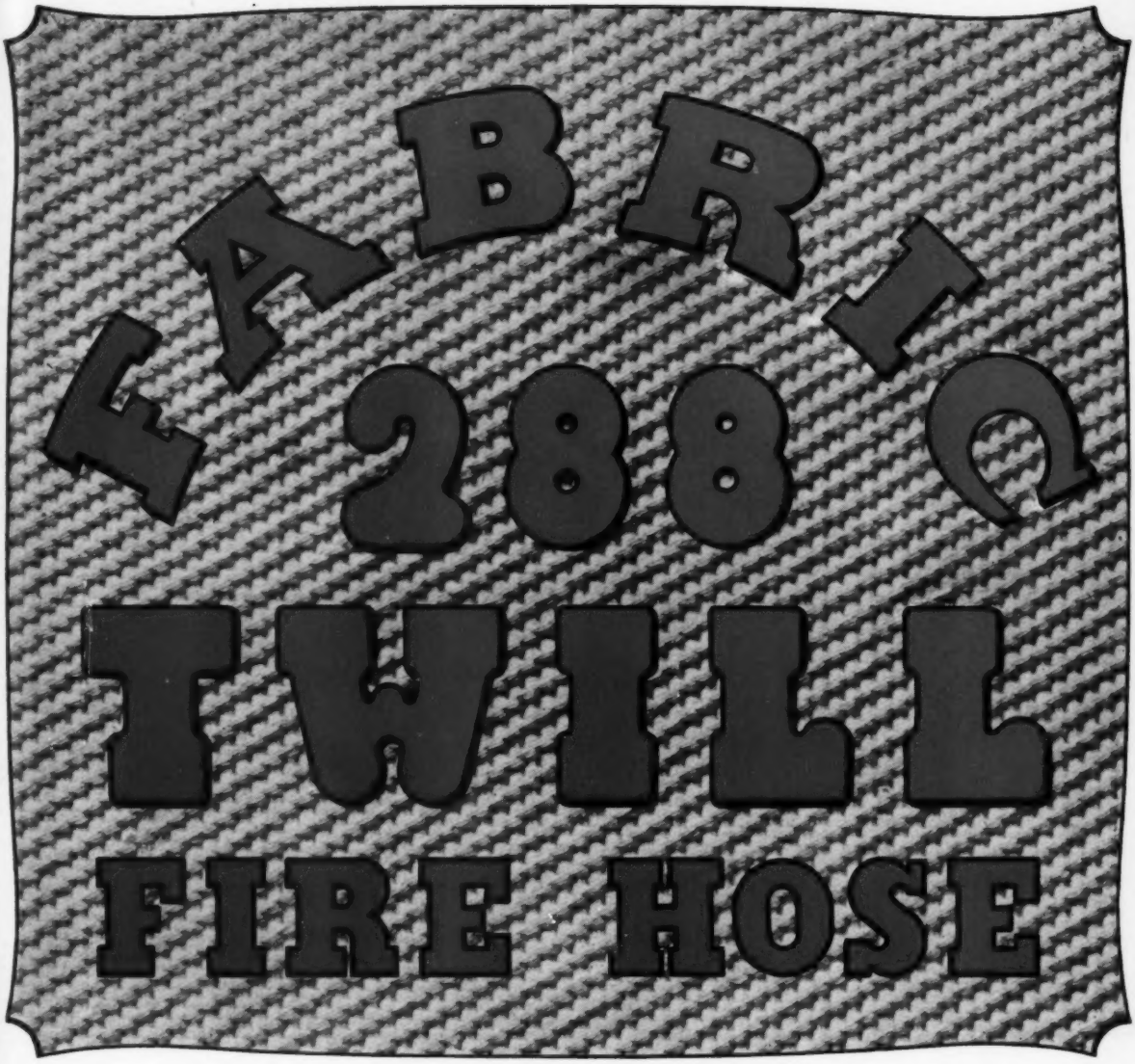

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Sectional view of Alfco Anti-Statik Horn

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Fire King hose is 50% stronger, 12% lighter

B. F. Goodrich end protection adds years to hose life

A NEW chemically produced fiber, makes possible stronger, lighter fire hose. It is now used as "filler cord" in B. F. Goodrich Fire King hose. These cords go around the hose, carry the load under pressure, but are not affected by water or mildew, mild acids or alkalies.

Stands higher pressures—In actual tests, B. F. Goodrich Fire King hose with the new cord, proved 50% stronger than standard hose. Every length of Fire King is tested to 600 pounds pressure.

Lighter, more flexible—Fire King cord is lighter, more flexible than ordinary fire hose cord, making hose easier to handle and coil in a small diameter. New Fire King hose is 12 to 15% lighter than standard fire hose which is tested to only *400 pounds pressure.*

End protection—Fire King has the exclusive patented B. F. Goodrich end protection—an extra ply of hard woven cords extending 12″ from the coupling. Adds 100% more strength to coupling area. Not one single length of BFG fire hose with end protection has ever failed in the coupling area.

Fire King combines all the features of the highest grade B. F. Goodrich fire hose plus this brand new feature—Fire King reinforcing cord. The result is a premium double jacket fire hose 50% stronger, 12 to 15% lighter, yet only slightly higher in cost. It is available in both 1½″ and 2½″ sizes.

Departments looking for ways to lower hose costs by getting hose that lasts longer should write for the name of nearest BFG Fire Hose Distributor. *The B. F. Goodrich Company, Industrial & General Products Division, Akron, Ohio.*

Fire Hose
BY
B.F.Goodrich

the better to serve you

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will move to

larger quarters at

TRIPLE COMBINATION PUMPERS—500 TO 1500 PM

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New home of Mack fire apparatus, centralized in Allentown, Pa. —part of the greatest research, engineering, manufacturing and service facilities in the fire apparatus field.

Sharply growing demand for Mack fire apparatus has increasingly overtaxed our present production facilities at Long Island City. Particularly since the introduction of our popular aerial ladder, we've just about been bursting at the seams. So that we may continue to serve your needs dependably and efficiently, larger quarters have become imperative.

This problem has been solved . . . by setting up a separate and streamlined production line at Allentown, Pa., a short distance from the main Mack plants. Incorporating the most modern manufacturing and testing equipment manned by seasoned Mack personnel, these capacious new facilities will enable us to serve you even better than before.

In a few months, Mack pumpers, ladder trucks, hose and squad cars will be rolling off this line. Meanwhile, production on present orders will be maintained without let-up at Long Island City.

Our investment in this improvement is an investment in the faith in Mack apparatus that has led to their use by more than 1,000 American communities. It means a renewal and a strengthening of the traditional Mack pledge to the fire service — of our continued devotion to the highest standards of apparatus design, manufacture and maintenance. More than ever, "Built like a Mack" will signify *performance that tops them all.*

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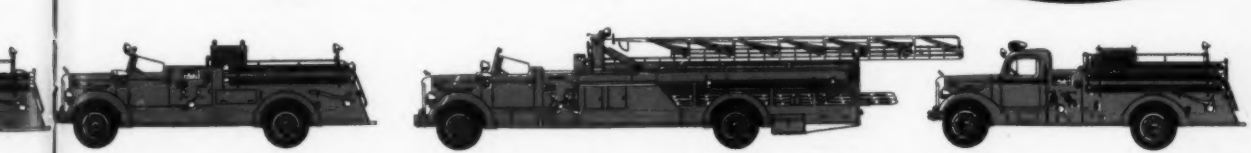

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DUO Safety FIRE LADDERS

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TUBULAR RAIL

Here's the favorite for service trucks the country over — DUO-SAFETY's famous 500 Series—featuring tubular rail construction. Provides greater strength, light weight, extraordinary safety with a maximum of climbing space and requires a minimum of banking height. . . . Available in all standard ladder sizes in two-section (500-A); three-section (525-A); wall ladders (550-A); and roof ladders (575-A). . . . Write for free catalog.

...and a companion ladder in wood

SERIES 100

These popular Duo-Safety series are of conventional Weston Style wood truss construction. Rung blocks and rails are of well-seasoned high grade Douglas Fir, rungs are second growth hickory . . . all finished with best spar varnish. Series 100 ladders are all built in standard sizes and are equipped with tormentor poles on long extension ladders.

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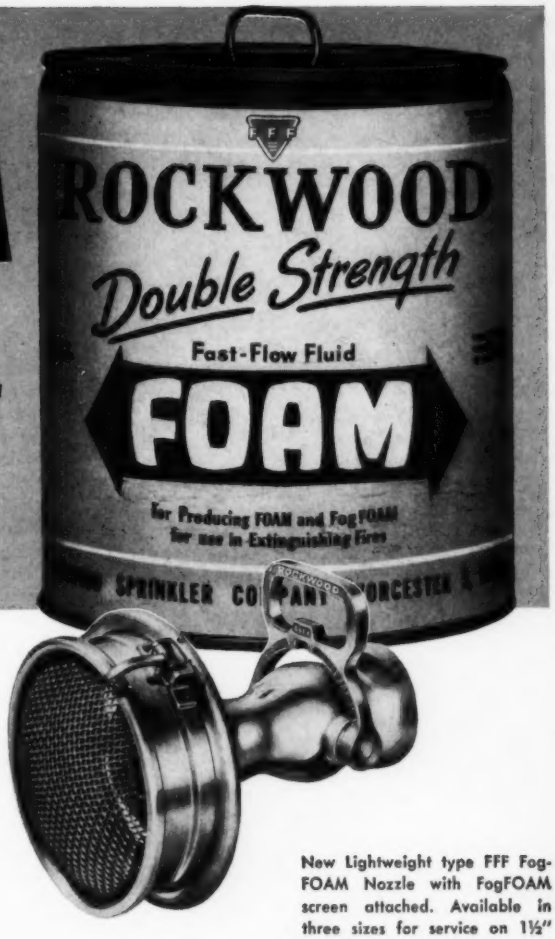
3 better ways to fight fires...

ALL WITH ONE NOZZLE



1 Fog FOAM
2 Solid FOAM stream
3 High Velocity WaterFOG

Rockwood *Double Strength* FOAM Liquid used thru Rockwood FFF FogFOAM Nozzles enables fire fighters to cover burning surfaces with a blanket of FOAM faster and more efficiently. The 3 methods — 1. FogFOAM, 2. Solid FOAM Stream and 3. High Velocity WaterFOG combined in the one FFF FogFOAM Nozzle will give you a *better weapon* for extinguishing and controlling fires in gasoline and other flammable liquids and materials.

Rockwood FOAM Liquid and FogFOAM Nozzles are now being used to fight large running gasoline fires and spill fires in oil refineries, fires in oil storage tanks — or for crash-rescue fire fighting at airports and also for municipal and industrial fire fighting requirements. All these hazards require special proportioning systems for discharging the FOAM Liquid. Custom engineered proportioning systems to meet such unusual requirements is a Rockwood specialty. For complete data and prices write today.

Remember, the most efficient way to apply Rockwood FOAM Liquid and Wetting agent to most fires is thru Rockwood fire fighting devices.

New Lightweight type FFF FogFOAM Nozzle with FogFOAM screen attached. Available in three sizes for service on 1½" and 2½" or 3½" hose.

(1.) Thru the FogFOAM screen a wide pattern of FogFOAM can be applied directly to the burning gasoline without harmful agitation to the surface. This means faster and more efficient extinguishment of fire. FogFOAM screen can easily be attached or removed.

(2.) Thru FOAM shaper a solid FOAM stream can be projected to reach fires at considerable distances. FOAM Shaper can also be easily attached or removed.

(3.) If FOAM Liquid supply is exhausted, the Rockwood FFF FogFOAM Nozzle will discharge a wide pattern of *High Velocity* WaterFOG.

ROCKWOOD
SPRINKLER COMPANY
54 HARLOW STREET
WORCESTER 5, MASS.

PORTABLE FIRE PROTECTION DIVISION

11 PROVEN WAYS

1 M.S.A. PNEOLATOR

Because the Pneolator is the nearest automatic approach to natural respiration it assures maximum chance of recovery in all cases of arrested breathing. Providing oxygen for the lungs at the pre-selected amount and pressure, the Pneolator breathes for the asphyxiated patient—aids the patient to full recovery. There is no "suction" cycle. Exhalation takes place by the normal passive return of the respiratory muscles. The Pneolator's intermittent positive pressure is effective in treating patients whose lungs are irritated by corrosive gases. Immediate change over to inhalator when the patient starts breathing.

Light in weight, the Pneolator can be conveyed immediately to the patient . . . conserving the vital minutes that may make the difference between recovery and tragedy. Ask for Bulletin No. CH-2, and a demonstration.

NOTE: The first few minutes after breathing has ceased are the most critical. Immediate application of manual artificial respiration should be started and continued until Pneolator is in use.

4 M. S. A. DEMAND MASK

Supplying compressed oxygen or certified pure air from a back-carried cylinder to facepiece, the M.S.A. Demand Mask provides complete breathing protection for a minimum of 30 minutes in toxic or oxygen-deficient atmospheres. Simple to use, completely dependable. U. S. Bureau of Mines Approved. Bulletin No. B-20.

5 M. S. A. OXYGEN THERAPY UNIT

Compact, easily operated, this instrument provides a dependable and effective means of supplying oxygen to the victim under control of his own breathing demand. Ideal for smoke inhalation, it can be used with any standard oxygen cylinder. Accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association. Bulletin No. CW-3.

6 M. S. A. ALL-SERVICE MASK

For fire-fighting efforts in air co taminated with smoke and gas, b where sufficient oxygen is prese to support life, the "All-Servic Mask assures dependable breat ing protection to the wearer. Avai able with the M.S.A. "Clearton Speaking Diaphragm for cle speech transmittal. Bulletin No. EA-8.

7 M. S. A. EXPLOSIMETER®

A compact, portable, easy-to-u instrument for checking suspecte areas for explosive gases an vapors during fires and in genera survey work. Body carrying strap and one hand operation permi unhampered use. Easily read dia rugged, simple to maintain. Bu letin No. DN-7.

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to increase Your Fire Fighting Efficiency and Safety

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Firemen equipped with the Chemox can enter and work in unbreathable or oxygen-deficient atmospheres with complete respiratory safety, because Chemox makes its own pure oxygen as the wearer breathes, from a replaceable chemical canister. Non-fogging lenses—no high pressure cylinder lines, or fittings. U. S. Bureau of Mines approved for 45 minutes minimum service per canister. Bulletin No. B-14.

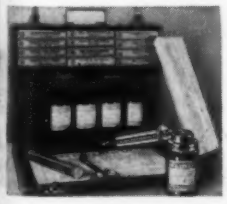
3 M.S.A. STREAMLINED FIREMAN'S HELMET

Made of one-piece high pressure molded laminated bakelite, this popular helmet offers maximum protection against bumps and blows. It is light and comfortable to wear; withstands heat, water and chemicals; provides high dielectric strength against electrical hazards. Soft leather sweatband, adjustable crown hammock, self-ventilating. Bulletin No. DX-9.

8 M. S. A. FIRST AID KIT

Designed to meet all the requirements of fire department service, contents of the M.S.A. Kit are protected against dust, dirt, and moisture. Features a complete supply of emergency treatment for immediate application. Unit packages permit quick location, and economical replacement. Bulletin No. FA-100.

9 M. S. A. FOILLE SPRAY KIT



This kit is supplied with an efficient spray gun for quick application to burned areas, promptly easing pain and aiding in the control of shock. An ample supply of Foille in jars which connect to the spray gun and a complete assortment of first aid dressings and accessories are assembled in a weather-proof steel case. Bulletin No. FA-1-A.

10 M. S. A. FLOOD LAMP

Safe in gaseous atmospheres, this lamp combines brilliant, unfailing illumination with easy portability. Equipped with standard Edison Batteries in magnetically-locked steel container. Lamp housing is water and dust proof. Bulletin No. M-10.

11

Call the M. S. A. Man on your every safety problem ... his job is to help you.

MSA

SAFETY EQUIPMENT HEADQUARTERS

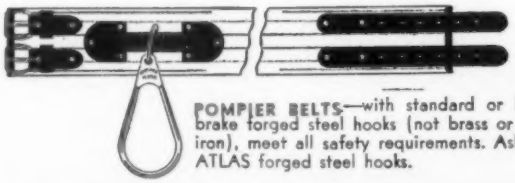
Just a minute chief—

are these your men?

If not— you may be missing something. A trained group of men can mean the difference between a successful or unsuccessful life net rescue. Every fire chief wants his men properly educated in equipment operating evolutions. Training is a necessity. Many fire departments conduct regular life saving drills employing the ATLAS LIFE NET. If your men are not part of this picture, it's up to you to write us today for training instruction in this fastest and safest method of rescue.

CRASH AXE—Axe and handle one piece forged steel. Moulded rubber insulated handle tested for 20,000 volts. Well balanced. Note unique cutting edge and pick for quick cutting and ripping. Heat treated and hardened cutting edge for metal opening. Standard equipment on aircraft. With or without leather sheath.

The ATLAS LIFE NET has been responsible for the saving of many lives. In the hands of trained firemen it has been and always will be the fastest means of rescue. It replaces slow and exhausting ladder rescue. Training in this faster means of rescue should be part of every fire department program. We will be glad to send you training procedure without obligation. The ATLAS LIFE NET is the result of years of experience in producing the finest and strongest net available to the fire service. Today it is unquestionably the "One and only" in the field.



POMPIER BELTS—with standard or hand brake forged steel hooks (not brass or cast iron), meet all safety requirements. Ask for ATLAS forged steel hooks.

ATLAS *"The World's best life net"*
27 Warren Street, New York 7, N. Y.
SAFETY EQUIPMENT CO., Inc.

IT'S SEAGRAVE for St. Paul

The proof of Seagrave dependability and trouble-free service . . . More and more American cities specify Seagrave Aerial Ladder Trucks every day.

It was only natural then that St. Paul should select Seagrave. This city has recently taken delivery of two Seagrave 100-foot and a 65-foot Aerial Ladder Truck.

Thus it goes throughout the nation. The electrically-welded construction of the Seagrave Safety-Steel Aerial Ladder has proved to be the safest and sturdiest and the Seagrave hydraulic power the most dependable.

Why should your city accept less when it can have trouble-free Seagrave Apparatus at economical cost?

Seagrave
THE GREATEST NAME IN FIRE APPARATUS

THE SEAGRAVE CORPORATION
COLUMBUS, OHIO
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THE GREATEST NAME IN FIRE APPARATUS

Life Line FOR HARD-TO-REACH RESCUES

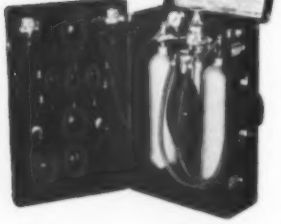
the

E & J MICRO EXTENSION UNIT

FOR EFFICIENT, SAFE, AUTOMATIC INHALATION AND EXHALATION RESUSCITATION WITH PURE OXYGEN

- NO LARGER THAN YOUR HAND
- NO HEAVIER THAN YOUR SHOE
- PLUGS IN TO E & J RESUSCITATOR WITH ONE SMALL HOSE
- ONE OR TWO MICRO UNITS AND E & J RESUSCITATOR EACH OPERATE INDEPENDENTLY TO TREAT UP TO THREE VICTIMS SIMULTANEOUSLY
- FULLY EFFICIENT AND SAFE FOR ANY PATIENT—ADULT, CHILD OR INFANT

To see for yourself, get on the list for a free demonstration. Write to E & J today.



E&J RESUSCITATOR • ASPIRATOR • INHALATOR

Your assurance of saving victims of asphyxiation is greater when you have an E & J Resuscitator available for immediate use. It breathes completely for the victim, using pure life-giving oxygen. It does it automatically, efficiently, safely, tirelessly and with built-in skill. Most hospitals throughout the world use it routinely; Rescue Squads say it is their greatest life-saving tool. *Don't be without it.*

E&J MANUFACTURING CO.

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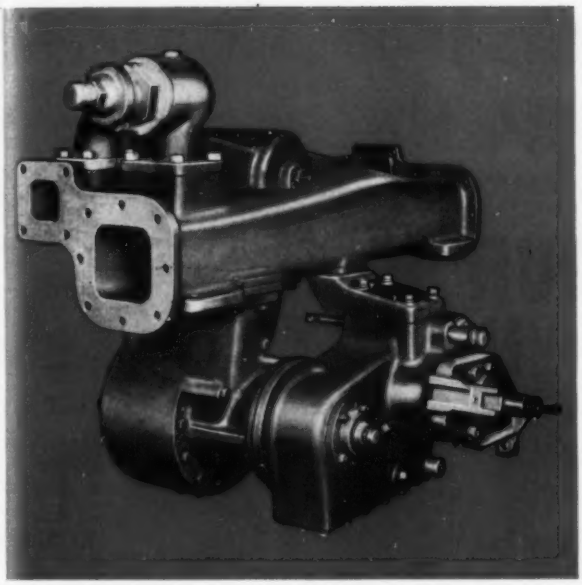
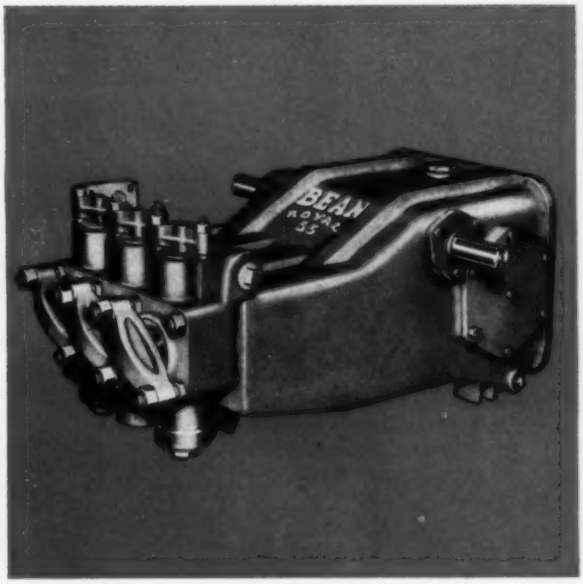


SLUGGING firepower for the John Bean HPV Fire Fighter is supplied by the Bean volume pump. Dependable, long-lived performance is assured by simplified solid-case design, built-in crossover system, four-bearing impeller shaft, oversize bearings, and other advanced engineering features. The Bean volume pump is compact, simple to operate, easy to service.



YOU GET fast-striking high-pressure fog with the famous John Bean ROYAL High-Pressure Pump. Bean fog is TRUE high-pressure fog developed by a positive-displacement, three-cylinder pump. Long life and trouble-free performance result from porcelain-lined cylinders, stainless-steel ball valves and valve seats, and rugged eccentric drive with helical-cut gears.

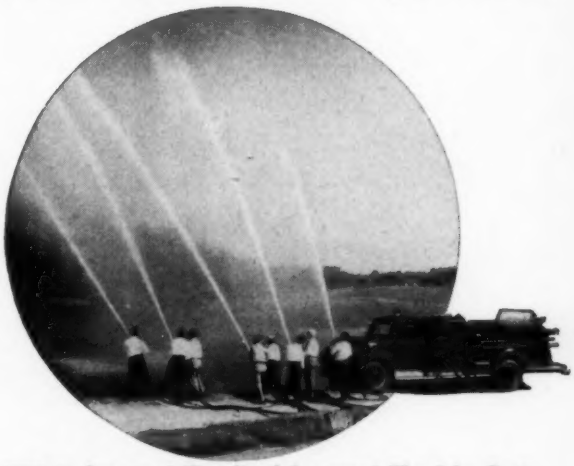
JOHN BEAN TWO-PUMP fire fighters deliver the one-two knockout punch

Two-Fisted Fire Fighting Demands Full Volume And True High-Pressure Fog TOGETHER. You Get It With John Bean Two-Pump Design.

WHEN FACE-TO-FACE with a tough fire, you appreciate the hitting power of the John Bean two-fisted HPV Fire Fighter. The one-two knockout punch of FULL VOLUME and TRUE HIGH-PRESSURE FOG is at your instant command because of John Bean two-pump design.

Two lines of fast-striking high-pressure fog are supplied by the rugged John Bean High-Pressure Pump operating from its own independent water supply. Three lines of slugging firepower from the dependable Bean volume pump can be put into service AT THE SAME TIME. By combining volume and true high-pressure fog, you get ALL THE FIRE-POWER from a John Bean HPV Fire Fighter when you need it most.

Get the facts about John Bean Two-Fisted Fire Protection. Write today!



HERE IS firepower! *Two-fisted* firepower! The John Bean HPV Fire Fighter is supplying 60 gallons a minute for two high-pressure fog lines at 850 lbs. pump pressure and, AT THE SAME TIME, three 2½-inch volume lines deliver 750 gallons a minute at 150 lbs. pump pressure. Two-fisted firepower from two-pump design.

JOHN BEAN *TWO-FISTED* FIRE FIGHTERS

Can be mounted on most standard truck chassis

FOOD MACHINERY & CHEMICAL CORPORATION

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BUILDERS OF BEAN HIGH-PRESSURE PUMPS FOR OVER 60 YEARS

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FIRE ENGINEERING

JANUARY, 1952 VOL. 105, NO. 1

With the Editor

When Water Fails

On December 18th, last, a break in a forty-two-inch water main cut off all domestic water and all water for fire fighting in Bayonne, N. J., a city of 80,000 people, including many industries, large oil refineries and oil storage farms. For seven hours, the city was pretty much at the mercy of fire.

Providentially, during this period, not a single tap of the bell was sounded in the city's fire stations, where officers and men awaited with apprehension of being called to any such emergency.

This incident is recounted here because it seems to us to point up the wisdom of pre-planning for such potentially disastrous contingencies.

With the coming of colder weather, possibility of breaks in water supply mains increases. Regrettably enough, these breaks occur all too often at the most inopportune time, when the results are likely to be catastrophic. Nor can the outcome of these breaks be foretold.

This is common knowledge to most fire chiefs and water supply superintendents. Nevertheless, very few municipalities have developed comprehensive plans to meet such emergencies.

Every city, town and village depending upon underground water mains to provide essential water for fire protection, should have a pre-determined plan of what to do in the event of any failure of their supply. It won't do to leave things to chance—no matter how capable and efficient the local fire and water departments may be.

Every fire department should know its part in such a plan—in fact, should have its own program of procedure to meet such situations, regardless of any local over-all disaster plan.

A year ago, a break in a water main nearly cost the city of Pittsburgh, Pa., a conflagration. Only fast work by the fire department in making use of its river fireboat prevented what might well have been a catastrophe.

What should an emergency water plan include, from fire department standards? The answer depends naturally upon many factors, perhaps the most important of which is the coordination of all municipal public services to meet the emergency.

Police, health and public works, as well as water and fire departments, all have a part to play. Their roles depend upon the extent and gravity of the incident, the problems involved, the resources that can be mobilized and, not the least of it, just who is to command during the emergency.

One factor every such plan should consider in the way of fire defense is that of mutual aid. It may be necessary to set up extensive emergency pumping relays, or to increase the number of water-carrying apparatus. Additional manpower may be needed. Special radio communication facilities, including walkie-talkies, may be required, together with voice amplification (P.A.) systems and other special equipment.

The head of the fire department should know what may be needed, and where and how to get it with least delay. If there are auxiliary water supplies available, naturally he should be familiar with them, and know beforehand how to utilize them to best advantage.

These are problems that should not be left to Civil Defense, or any other interests, but should be worked out by the regular municipal services that will be the first to be affected by any water stoppage, and the first to be called upon for remedial measures.

Once such a plan is created, it should receive more than paper and lip service. It should be tried out. Municipal services can only learn to work together by working together. Many cities have excellent mutual aid fire defense programs, many have splendid plans to meet disasters, such as flood, hurricane, etc., *on paper*. But not many such municipalities actually have put these plans to the test, i.e., practiced, trained, and drilled with them.

If your mutual aid and disaster program does not include consideration for meeting emergencies such as threatened Bayonne and Pittsburgh, it should; and there is no better time to review such plans than the present.

Fred Shepperd

Explosion Injures 27 Firemen At 2-11 Alarm Chicago Blaze

By PAUL C. DITZEL

ONE of the major hazards confronting today's fire departments is the increasing incidence of blazes in drug stores.

Today's modern drug store with its heavily stocked basement containing thousands of different items, most of them of inflammable material, creates a fire problem which veteran firemen have compared to the five and ten cent store basement fires which created a problem for yesterday's firemen.

The modern drug store not only sells the same or similar items that the five and ten cent stores do but gives firemen the added problem of fighting fires where a combination of pharmaceuticals and chemicals are involved.

Chicago, Ill., recently was confronted with a blaze in the basement of a North Side drug store. Firemen, who responded to a 2-11 alarm, appeared to have the blaze under control after a lengthy battle. As the firemen moved in for mopping up operations an explosion in the basement resulted in injuries serious enough to hospitalize 27 firemen. At least another two dozen firemen were injured by the blast but did not require hospital attention.

Assistant Chief Fire Alarm Operator Phillip Manning, Operator-in-Charge Murray Corrigan (son of Chicago's Fire Commissioner Michael J. Corrigan), Junior Operator Stanley Schultz and Switchboard Operator Matthew Tomlan were on duty in the Downtown Fire Alarm Office in the City Hall Building when a telephone alarm was received for a fire at 2754 North Clark Street.

Engine 55 and Hook and Ladder 44, which share adjacent quarters, were dispatched via fire alarm loudspeaker to the address. Engine 55 and Truck 44 are located about one-half mile away from the fire building. Rescue Squad 10 and the Chief of the 13th Battalion followed the engine and the truck on the still alarm. A Chicago Fire Insurance Patrol rig also responded.

This FIRE ENGINEERING correspondent arrived with the still alarm companies.

As the still alarm companies drew up to the Parkway Drug store, which is located on the southwest corner of the busy triple intersection of Diversey Parkway, Broadway and Clark streets, smoke was coming from a side door near the prescription counter. Engine 55 dropped several lengths of line and took a hydrant on the corner in front of the drug store. Hook and Ladder 44 raised its aerial ladder to the roof of the two story stone building. The drug store occupied the entire first floor of the building, which was about 80 feet long and 35 feet wide. The second floor was occupied by offices of dentists and physicians and surgeons.

The Truck and the Squad immediately set about ventilating the building as the smoke became thicker. A plate glass window on the Diversey Parkway side (the long side of the drug store) was smashed with pike poles and firemen then chopped through a false wall in an effort to find the seat of the fire.

When the Battalion Chief arrived, he ordered that a fire alarm box be pulled to bring in additional equipment.

Box 8124 was received at the fire alarm office at 12:29 p.m., at the height of the luncheon rush hour in the busy intersection.

The box alarm called out an additional three pumpers, another hook and ladder, another battalion chief and Raymond Daley, The Third Division Fire Marshal.

Division Marshal Daley ordered his driver to strike a 2-11 alarm from Box 8124 at 12:40 p.m. The 2-11 called out four more engines, two ladder companies, another rescue squad, a high pressure wagon, a water tower, Fire Ambulance 6 and one battalion chief. Although the fire probably was still in the stages where it could be handled by box alarm companies, Division Marshal Daley showed good fire judgment in calling additional fire equipment to the fire ground. His judgment later proved sound. The explosion that tore through the building crippled what would amount to his whole first alarm complement of men.

Firemen wielding sledge hammers smashed open sides of the building on the Clark street side and the Diversey side and proceeded to put basement pipes into operation. The exertion of smashing through the thick cement walls on the outside was especially exhausting because of the heavy smoke which by now heavily charged the entire first floor of the drug store.

The remaining plate glass windows were knocked out by other firemen.

Fire exposures included a Florsheim Shoe store on the south side of the fire building, a narrow alley at the rear of the building and Diversey Parkway on the north and Clark street on the east. The Florsheim store filled with smoke and firemen strung lines into the store. Several stores also adjoined the drug store on the west exposure. They suffered only minor smoke and water damage.

There were adequate hydrants in the area and exposures created only a minor problem. The size of the big intersection provided ample opportunity for maneuvering of fire apparatus.

As the fire appeared to be checked. First Deputy Fire Marshal John J. Haberkorn, who responded on the 2-11 alarm, entered the basement. Chief Haberkorn later reported that he detected a strong smell of gas from a refrigerating system.

"The smell had a strong, sweet quality about it and I ordered Squad 1 to bring in some gas masks. We could not smell any illuminating gas," said Chief Haberkorn.

The basement was relatively free of smoke, but there was about 2½ feet of water; Chief Haberkorn said he does not believe the water had anything to do with the blast.

The basement pipes had killed all visible signs of the fire and Haberkorn ordered the basement pipes to be shut

Fire fighters direct streams of water into the burning Mills Building in Chicago on October 26. Explosions which occurred in the two-story building injured 27 firemen.

off. He said he was able to remain in the basement fully 10 minutes without the aid of breathing apparatus.

"After I smelled the gas, I asked for masks from Squad 1 and sent two firemen with an inch and a half line into the basement to find the seat of the smoldering fire. There was very little heat in the basement. As I turned around to go back up the stairs, there was a tremendous explosion," reported Chief Haberkorn.

The explosion sent splinters of glass flying into the faces of firemen. The firemen on the Clark street side of the fire caught the full force of the blast, and it was here that most of the serious injuries took place.

"Following the flash explosion there was a wave of heat but no fire," said Chief Haberkorn. "There was no fire following the blast, and this is fortunate. If there had been fire, we would have been burned to death."

Firemen James Casey and James Murphy, both of Rescue Squad 1, were wearing masks. They were the firemen Chief Haberkorn sent into the basement to find the seat of the smoldering fire.

"We were in the basement with oxygen masks trying to find the source of the fire," said Fireman Casey. "We started to go into the boiler room and then decided it was too dangerous. Just as we turned away, the blast occurred. I think we were so close to the blast that it went around us and we escaped alive."

Firemen Casey and Murphy suffered burns on the ears and neck.

Haberkorn said he rushed for the basement stairway when he felt the explosion, and was forced to push debris aside to escape. Then he went down again and helped pull out the dazed firemen.

"Four of the firemen in the basement were in the stairwell and two firemen with masks (apparently Casey and Murphy) were just coming out. One fireman was sitting completely dazed in the corner of the basement," said Chief Haberkorn.

Above the basement and on the street the situation was chaotic as firemen staggered about either stunned by the explosion or cut by the glass or burned by the searing flash.

A special call was sent in for four fire department ambulances to assist the ambulance already on the scene, and two more rescue squads were sent to the scene.

Police Disaster Plan Put Into Action

The Police Department, which automatically put in Emergency Plan 2 following the sounding of the 2-11 alarm, jumped the Plan to their disaster plan, referred to as Plan 5. All available police wagons and police cars were sent to the scene via radio to assist in removal of injured firemen. Several Park District police squad cars were pressed into service and a Chicago newspaper photographer's car was used to transport injured firemen to several nearby hospitals. Only one spectator was reported injured.

Between 15 and 20 minutes after the first explosion, a second explosion, not as great as the first, shook the building.

Chief Haberkorn said he believed the first explosion was caused by illuminating gas that mixed with the freon gas, although the odor of illuminating gas was not detectable around the building. Freon gas is not a mixture known to explode violently, such as the explosion which tore through the drug store.

Chief Haberkorn believes the strong smell of the refrigerant prevented firemen from detecting the odor of escaping illuminating gas. A pocket of gas built up and resulted in the explosion. Chief Haberkorn said he was as yet unable to explain the cause of the second explosion. Cause of the fire itself was not immediately determined.

The fire blast lifted the concrete floor of the drug store two inches and it sunk back down. None of the concrete, floor, which was between five and six inches thick, dropped into the basement, however.

Incorrect Information Given Fire Department

Chief Haberkorn said the manager of the drug store gave Third Division Marshal Daley incorrect information about the extent and size of the basement. The firemen's efforts were hampered by their groping about in the basement.

Only three rescue squadmen, including their lieutenant, four enginemen, Battalion Chief Adolph Peterson and Chief Haberkorn were in the basement when the explosion let go. Most all these firemen were cut and burned. Chief Haberkorn said it was odd that the firemen on the first floor and outside the drug store suffered the most serious injuries.

Chief Haberkorn said there were three gas meters in the center of the drug store basement and the meters were fed by a three-inch pipe leading in from the Clark street side. The meters were burned off, but Chief Haberkorn said he has been unable to tell whether the meters were burned off before the explosion or were torn off by the explosion.

Immediately following the explosion, roll call was ordered for all companies to determine if any firemen might be inside the wrecked building. Chief Haberkorn said he went into the water-filled basement and groped about for firemen who might have been trapped under water by falling debris.

No one was hurt in the second blast.

The Illinois Bell Telephone company said the fire cut one of its cables carrying 200 pairs of wires. Fifty telephones were knocked out by the fire and explosion. Several emergency crews repaired the damage and mobile telephone equipment also was sent for emergency use if needed.

On the first floor of the drug store, a case on the south wall oddly stood intact. Rows of perfume bottles and other merchandise sold by drug stores stood unbroken.

Fire Commissioner Michael J. Corrigan responded when he heard of the heavy number of casualties. He praised Chief Haberkorn's courage in helping to pull the injured firemen out of the basement and up a partly-collapsed stairway.

Chief Haberkorn said he had not discounted the possibility that a number of the many chemicals mixed together, when basement pipe streams smashed their containers, might have caused the explosion.

The fire demonstrated the great explosion potential where large quantities of today's modern drugs and chemicals are stored together. Undoubtedly there were many ethers, acetones and various alcohols stored in the basement. Separately they were of a minor fire hazard, but mixed together they created a great fire and explosion potential.

Following is the log of alarms:

12:23 p.m.—Thursday, Oct. 25, 1951—Telephone Alarm received by by Downtown Fire Alarm Office. Engine 55, Hook and Ladder 55, Battalion Chief 13, Rescue Squad 10 and a Fire Insurance Patrol. Still alarm companies were dispatched via fire department loudspeaker system.

12:29 p.m.—Box 8124, pulled by Paul C. Ditzel. Engines 22, 33, 78, Hook and Ladder 21; Division Marshal 3; Battalion Chief 3.

12:40 p.m.—Box 8124 2-11, pulled by Third Division Marshal Raymond Daley. Engines 4, 20, 27, 56. Hook and Ladders 3, 10; Rescue Squad 1; High Pressure Wagon 2; Water Tower 2; Light Wagon 2; Fire Ambulance 6; Battalion Chief 2.

The following companies automatically changed quarters: Engines 9-27; 21-55; 103-33; Trucks 2-10; 7-21; Battalion Chiefs 8-3; 25-13.

1:15 p.m.—Special Duty, Ambulances 11, 7, 1, 3 and Rescue Squads 6 and 2 to Box 8124.

2:09 p.m.—Box 8124 struck out (Signal 3-3-2-2-2 by orders of 2-1-5, Chief Fire Marshal Jeremiah McAuliffe).

November Fire Losses

Estimated fire losses in the United States during November were $60,064,000, it was announced by Lewis A. Vincent, general manager of the National Board of Fire Underwriters.

This is an increase of 7.7 per cent over losses of $55,790,000 reported for November, 1950 and an increase of 9.9 per cent over losses of $54,660,000 for October, 1951.

Losses for the first eleven months of 1951 now total $663,199,000, an increase of 6.7 per cent over the first eleven months of 1950 which totaled $621,640,000.

These estimated losses under fire insurance policies include an allowance for uninsured and unreported losses.

Eighth Purdue Arson Investigator's Seminar in April

The Eighth Annual Seminar and Training Course for Arson Investigators will be conducted at Purdue University, Lafayette, Ind., April 28-May 2, 1952, it is announced by Prof. J. L. Lingo, Director of Purdue's Public Safety Institute.

The seminar, which is conducted by the Public Safety Institute with the cooperation of local, state and national organizations interested in arson control and prevention, affords opportunity for specialized study and discussion of arson investigation problems under the guidance of outstanding fire and police specialists.

The seminar offers the only program devoted exclusively to arson detection and investigation. Established in 1945, it is attended by persons from many countries. It is endorsed by leading fire, police and insurance companies. Complete details of the 1952 Arson Investigators' Seminar are available from the Public Safety Institute, Purdue University, Lafayette, Ind.

Fire Service Ladders and Their Use—Part XX

Ladder Evolutions, Using Long Extension Ladders, Three Men

By ROI B. WOOLLEY

Editor's Note: This is the sixth Chapter dealing with ladder evolutions. The previous five Parts were as follows: Part XV (August, 1951): Removal of ladders from apparatus; their handling and climbing. Two and four men carries were pictured; Part XVI (September, 1951): One-man raise using short extension ladder; Part XVII (October, 1951): Two-men operations, using short extension ladder; Part XVIII (November, 1951): Two men flat raise, using wall ladder; Part XIX (December, 1951): Four men operation, using long extension ladder.

This chapter covers much the same operations as those of last month (Part XIX) except that three instead of four men comprise the crew. As pointed out in the preceding Chapter, the term "long extension ladders" means any ladder between 24 foot and the longest extension ladder without poles—the limit usually being 35 feet. Any extension ladder exceeding that length should have poles, or tormentors.

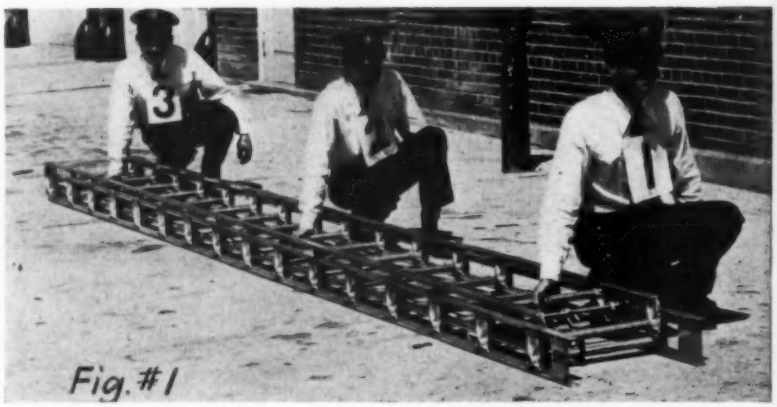

Fig. #1

LAST month's Chapter of this series described the removal and raising of a "long" extension ladder, using a four man crew. The operational procedure would be the same for any type of non-pole long extension ladder made today. The handling and raising of pole ladders will be the subject of a later Chapter.

Although the four-man crew is preferable for fast, safe operations involving the handling and raising of long extension ladders, there invariably comes a time in the average fire department where that much-to-be-desired crew is not immediately available and where, in the interests of rescue or fire attack, a smaller crew must perform the operations.

For this reason it is advisable to describe and picture what is considered the most acceptable methods of performing the same operations shown in last month's four-man operations, but using the three-man crew, instead of the four.

For the purposes of this installment, both the wood and light metal type ladders are illustrated. It is hardly necessary to point out that one method of carry may be better for operating with one type of ladder than another. Where students of ladder practices have the opportunity to perform comparative evolutions, it is easy to determine for themselves the more practical and efficient methods for carrying and raising each type.

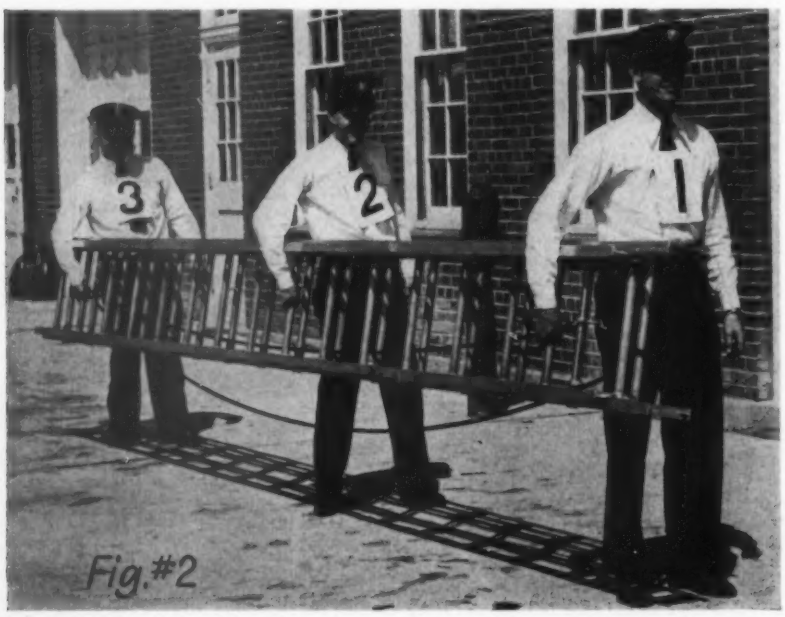

Fig. #2

The initial steps of removing the long extension ladder from the truck are similar to those already described where the four-man crew is used, the only exception being that the three-man crew is distributed about evenly along the rails (beams) of the ladder when removing it from the apparatus.

In this operation, some instructors prefer to have the men all face away from the truck (toward the line of travel they must take) and thereby do away with the need of pivoting under the ladder to reverse direction. Some also prefer to have the three-man crew immediately assume a "beam" carry whereby one rail rests on the shoulders of the crew as described later in this installment. Others prefer to have the men let the ladder drop to the under-arm carry as soon as it is clear of the body of the apparatus. Still others, where the ladder in question is aluminum, and bedded low in the apparatus, find it expedient to carry the ladder about as shown in the two-man carry in Fig. 1 of Part XV (August, 1951, Page 633). From this position the ladder can be laid flat on the ground or shifted easily to the under-arm carry.

With the under-arm carry evolution, where the ladder is to be picked up from the ground, the three-man crew takes position about equal distance along the ladder, all on the same side as indicated in Fig. 1. In this illustration the men are all shown on the left. The end men are stationed at the second rung, the third man at a center rung. This brings the normally strongest arm, the right, into use. Note the legs are bent so as to be able to take as much of the strain

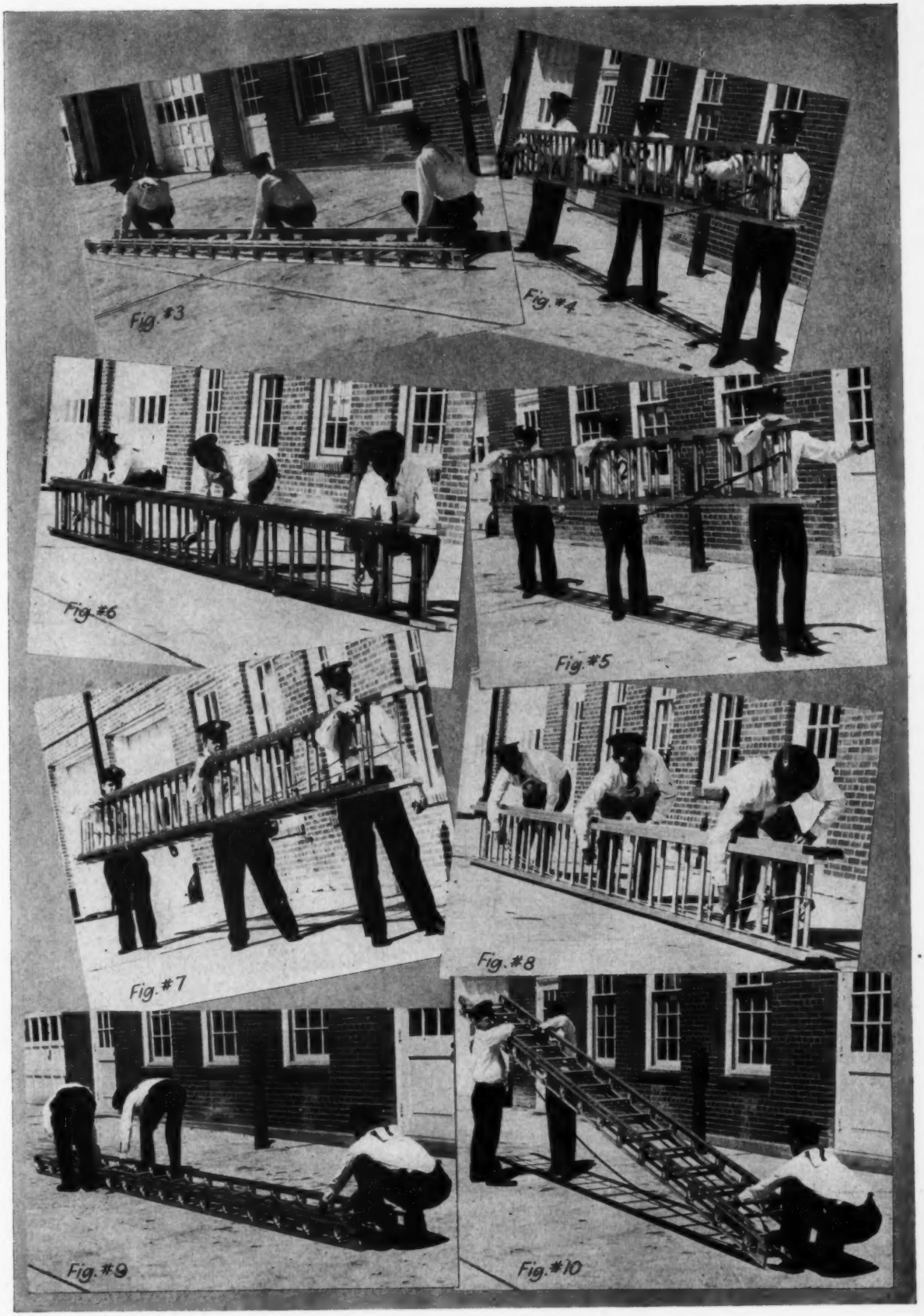
Fig. #3
Fig. #4
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Fig. #10

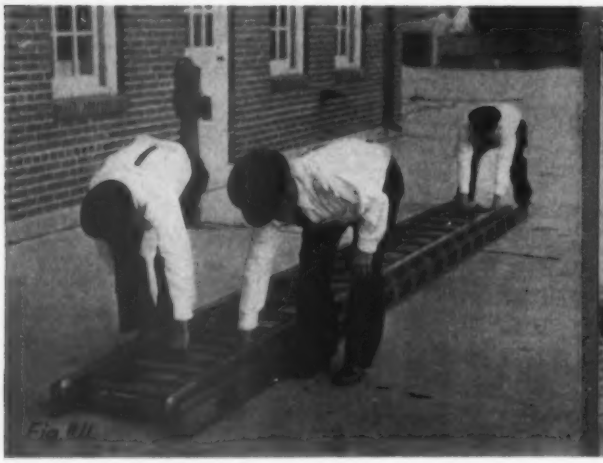


Fig. #11

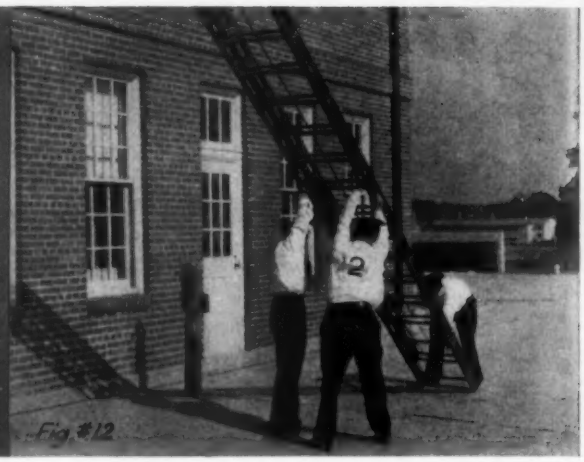


Fig. #12

of the lift as possible. The hands are placed in the center of the rungs with the palms forward.

At the command "lift," the three pick up the ladder, or rather, come erect with it, the near beam swinging up under the arms of the crew, as noted in Fig. 2. No attempt is made to snug the ladder up under the armpits. However, the grip on the rungs should be such that the carry brings the lower rail at knee level, or slightly above. Too high a carry can cut off the circulation of the carrying arm. Too low a carry can cramp the wrist, and permit the lower beam to swing in against the legs.

Fig. #13

In the position pictured (Fig. 2) the lead man is in position to protect the heels or butts of the ladder or to ward off obstacles with his free arm. This carry may be found less convenient than the shoulder carry when the ladder to be used is the heavier, wood type.

Shoulder Carry

The first step in the shoulder carry, using metal ladders, is similar to the pickup for the under-arm carry. The three men of the crew, however, face in the opposite direction to the line of travel. The end men grasp the second rungs from the butt and tip; the center man grasps the middle rung. Palms of hands are forward. Rungs are gripped at about the center as shown in Fig. 3.

At the command, all men lift, swinging the rail of the ladder that is away from them, upward, at the same time pivoting and passing the free arm through the ladder as it is shifted to the shoulder, as shown in Fig. 4. In actual practice, the pivoting is almost simultaneous with stepping out with the carry. The completion of this evolution is shown in Fig. 5, where the arm that has been put through the ladder is brought up so that the hand may grip the rail. It will be noted that this carry leaves the forward man with an arm free to ward off obstacles and guard against the butt striking anything. Although of course not essential, this operation, like most carries, is greatly facilitated if men can keep step.

Three-Man Carry, Wood Ladder

In both the shoulder and the under-arm carry of the heavier, wood extension ladders, the three-man crew does not pivot. To facilitate the pickup for both these carries, using the wood extension ladder, it is rested on the ground, supported on one beam.

For the shoulder carry, the three men grasp rungs with both hands: the end men, the second and third rungs; the center man, the two rungs at about the middle of the ladder. The legs should be bent slightly so that they may take most of the strain of the lift as the ladder is swung up (Fig 6).

At the command, all men lift, and as the ladder comes up, the arm with hand grasping the rearmost rung is carried through between the rungs, as the ladder is shifted to the shoulder. This shift is coincident with the slight turn the men make to bring them facing the line of travel, as shown in Fig. 7. The extent to which men must shift or turn in this evolution will depend upon their position in the pick-up. The more they face toward the ladder, or to the rear, the greater must the turn be. It is not a full pivot, however.

For the side or under-arm carry, the ladder is also rested on one beam, with the men spaced along its length as in the preceeding lift, facing the direction of travel, with knees bent, one leg slightly ahead of the other, as shown in Fig. 8. One arm and hand are supported on the bent knee; the other is stretched over the ladder so that the hand grasps the rung close to the rail that is on the ground. Palms are toward the front.

On command, the men lift in unison, pushing upward with legs, and with the arm supported on the knee. The balance of the operation is similar to the carry previously described.

Three-Man Raise

The procedure of raising the long extension ladder, both metal and wood, are very similar to that of the four-man raise of such ladders. The main difference is that, in the three-man operation, a single man heels or butts the ladder, whereas in the four-man method, two men are on the butt.

This operation is pictured in Figs. 9 and 10. In Fig. 11 the men are shown in position to raise the ladder. The heel or butt man has his feet on the beams with hands on the second rung. The beam men grasp the third rung close to their side of the rails, with palms to the rear.

On command, the beam men lift while the butt man sways backward, keeping his feet on the beams. As the beam men raise the ladder, they pivot under it, to about face (Fig 10), after which, without pause, they push upward on the rails, as shown in Fig. 12.

The evolution of raising the wood extension ladder is almost identical with that for the metal ladder raise. Men

(*Continued on page* 61)

Fig. #14

Fire Prevention Week Universally Observed

Apparently More Fire Departments are Taking Fire Prevention Doctrine as a Steady Diet Instead of a Tonic

A STAFF REPORT

THIS year, Fire Prevention Week saw the usual campaigns, drives and other promotions, all of which had favorable repercussion, even if fire losses apparently showed no encouraging drop. What interested the editors of this Journal, however, is the apparently increasing number of fire chiefs who are now making fire prevention a part of their daily routine. There are more fire prevention bureaus, divisions and departments than ever before. More personnel are being given fire prevention duties than ever, even in the face of manpower shortages. Which is as it should be.

Unfortunately, there is insufficient space to even attempt to summarize all the good work that is going on. At best, we can only bring our readers herein a few high spots of activities taken from the records of municipal, private and government fire services.

Rochester and Monroe County, N. Y., Participate

The City of Rochester, and Monroe County fire fighters, put power into this year's Fire Prevention drive. Starting with a full-scale exhibition of the use of high and low pressure fog on Class B fires, at a demonstration planned by the Rice-Culver Fire Department, and involving units of Monroe County's Mutual Aid Plan, there was a continuous weekly round of demonstrations designed to dramatize modern fire control methods. Members of the County's Third Battalion, burned down an abandoned house, but the scheduled exhibition of Battalion 1 to show the use of wet water received a set back when a gang of teen-agers ignited the prepared stacks of baled-hay some time before the scheduled fire was to occur. This caused an unplanned response by the firemen, but little observation by the public.

The Rochester Fire Bureau, Chief John A. Slattery, conducted demonstrations at industrial plants, hospitals and department stores. A dramatic feature was staged when several barrels of oil on the roof of a department store were ignited, a box alarm sounded and four pumpers, two aerial ladders, the Protectives (salvage and rescue), the Chief of the Third Battalion, and Chief Slattery responded. Firemen went through the whole thrilling show, with every operation described to spectators over the Police Bureau sound truck. Apparatus responding included Engines 1, 14, 17, 23; Ladders 1 and 2, and the Protectives.

This demonstration was climaxed by "rescues" of "injured" persons by ladders; the lowering of a fireman from the room by means of a life line, and slides down roof-ropes by fire fighters. The blaze in the oil drums was knocked out by Engine 17 using high pressure fog. All fire apparatus responded from their stations, following receipt of alarm transmitted by radio from Station KEV-243 of the Fire Bureau. Some apparatus was at the scene within one minute from receipt of the call.

The annual Fire Prevention Week parade closed the observance, on Oct. 12, and displayed the equipment of some 40 fire companies, including Engines 1, 3, 4, 8 and 19; Ladders 1 and 10, the Protectives of the Rochester Bureau of Fire.

Dramatic Window Display Highspots Toledo's F. P. Week Promotion

High points of this year's Fire Prevention Week drive in Toledo, Ohio, was a striking animated display in the window of a downtown office building. The spectacular unit was built by Owens-Corning Fiberglas Corp., in cooperation with the Fire Prevention Committee of the local Chamber of Commerce.

The idea behind the display was to promote the use of non-flammable products. To dramatize the idea, passersby were urged to press a button in a designated spot on the window, whereupon an electric current was generated, causing a devil, painted on the display's backing, to spout out real fire. This flame enveloped non-flammable fabrics, of course made of Fiberglas, to point the moral.

Thousands "pushed the button" of this unique display during the Fire Prevention Week observance in Toledo, proving to themselves that Fiberglas does not burn and thus plays its role in prevention of flame spread. The display was installed in a downtown office building window by Owens-Corning Fiberglas Corporation and played a part in the city's Fire Prevention Week activities.

But this wasn't all of the Toledo Fire Prevention story. Other activities promoted by the Toledo Fire Department,

Raritan Arsenal Promotes F. P. Week by Float and on Drill Field

The Raritan Arsenal, N. J., has a fire department which preaches fire prevention all year 'round. During Fire Prevention Week, however, it splurges. This year, the fire fighters under Fire Chief F. Vaugoin carried the fire prevention story to all via a traveling billboard in the shape of a float, the same being one of the Arsenal white fire units. Besides pertinent slogans emphasizing the wisdom of continual vigilance in preventing fires, the float displayed different kinds of fire extinguishers, with terse instructions on how to use them.

In addition, the Arsenal Fire Department drill yard was dressed for the occasion, with explanatory placards. Incidentally, the Drill Field contains, besides the abbreviated drill tower, small replicas of the type of structures found in the Arsenal area in which test fires are built and extinguished. Shown in the picture are (l. to r.): Assistant Chief Koenig, Drill Master; Firemen F. Arrants, H. Rodgers, W. Burke, J. Collura, H. Lanning and Crew Chief G. McGuinness. The driver is Fire Inspector E. Gieber, creator of the float and the colored poster that was used throughout the Arsenal, sub-depots and local schools during Fire Prevention Week.

(William Malone is chief of the Fire Prevention Bureau) included: other downtown windows displaying fire fighting equipment; an all-week showing of fire apparatus at a downtown street intersection; visits by firemen to schools; instruction to hospital employees by the Bureau. Each fire station held open house during the week. A wrecked automobile was set up at another downtown intersection with appropriate signs telling passersby that the driver failed to give right-of-way to fire apparatus. Even a high school band entered into the spirit by doing a halftime formation devoted to the fire prevention theme.

Cities Swap Fire Inspectors

Something like a new system for inspecting fire hazards may have been inaugurated in New Hampshire when an "exchange of fire inspectors" was conducted by the cities of Franklin, Laconia and Berlin, at which fire departments of the three cities exchanged inspectors so that "favoritism" or "fear" would not influence any inspections.

The sponsors of the project were the newspapers of the three communities aided by the Mountain Insurance Field Club.

Sidelights of Fire Prevention Week, 1951

As usually happens, Fire Prevention Week this year got off to a bad start in some localities. On the first day of the ceremonies, which were observed throughout the nation following the Presidential and numerous gubernatorial proclamations, the City of El Paso was visited by a destructive fire that resulted in the deaths of four persons and swept five flimsy structures in the warehouse district, causing damage estimated at $322,000.

The Norfolk, Va., Fire Division launched a nationwide "Red Letter Drive" to promote the awareness of Fire Prevention Week. Fire Chief R. L. Woolard said 5000 letters had been sent to insurance and safety organizations and fire departments, urging that every calendar distributed in the United States carry red-emblazoned numerals for the second week in October, which is National Fire Prevention Week. H. S. Beall, Deputy Chief of the Norfolk Fire Department and chairman of the "Red Letter" Campaign Committee, reports enthusiastic support of the idea.

Many Safety Councils of the nation participated actively in Fire Prevention Week. The climax event of the Week in New Jersey was the "Annual Fire Show" staged at the Pyrene Proving Ground, Newark. Invitations were sent to fire chiefs, fire protection and safety engineers and others to witness the demonstrations which dramatically showed how fires of every different kind could be extinguished when the right fire extinguishing agents were properly applied. Several hundred observers attended the out-of-door sessions lasting from 1:30 to 4:00 P.M.

The idea that a city may be too big to conduct a successful Fire Prevention campaign has been dispelled by New York. This year's drive exceeded all previous efforts. Fire Commissioner Jacob Grumet and acting Mayor Sharkey handed out silver medals and congratulations to 335 public and parochial school children for prize winning essays on "The Fire Safe Home." There were parades and exhibitions of fire fighting; old apparatus paraded the streets; fire stations were all "open house" for the public, and heavy use was made of the radio, television and press to register the idea on the city's millions.

Reporters of the papers were permitted to make the rounds with a Bureau of Fire Prevention inspector, to prove what hazards are uncovered in the city.

The city's buffs cooperated in many activities, as did service clubs and other organizations. New York is one of the many large municipalities that has promised support to the I.A.F.C.'s drive to "Save the Lives of Children."

A make-believe fire that raged through 6,000 acres of hardwood forest in Northwestern Connecticut was successfully "corralled" 27 hours after it had been "sighted" on Oct. 3 by an imaginary warden. This imaginary fire actually became a huge natural classroom in which some 40 forest-fire experts from the six New England states and New York met to solve equipment and operational problems.

Late on Oct. 5th, the experts closed their log books on the "fire" and the first four-day training session of its kind in the region. The session was sponsored by the Northeastern Forest Fire Protection Commission, a seven-state compact organization organized after the disastrous New England fires of 1947.

Classroom lessons were held at the camp of Yale University's Forest School. As the supposed fires were logged, imaginary forces swung into ection to control and extinguish them. All forms of communications were used in the exercises and on the final morning a critique was held in which officials frankly admitted a host of mistakes and stumbling blocks, but all agreed a long step forward had been taken in welding the techniques of seven states into one. The worst obstacles were the odd-sized hose couplings and hose used by different states.

Actors spur New Orleans Fire Prevention Drive

Miss Barbara Payton (Mrs. Franchot Tone) and actor-husband Franchot Tone help popularize the 1951 Fire Prevention Week poster by posing with it and New Orleans Deputy Fire Chief Patrick Burke in the foyer of the Orpheum Theatre during the showing of the picture "Drums of the Deep South" in which Mrs. Tone starred.

Woonsocket Area Chiefs Get Publicity During Fire Prevention Week

Andy Palmer, Fire Marshal of the Woonsocket Fire Department, and Publicity Dynamo of the New England Association of Fire Chiefs, developed this montage picture and published it in the Woonsocket Call during the last Fire Prevention Week. The chiefs listed are: Cote, Woonsocket (center of helmet); from l. to r. at bottom: Campbell, Norfolk; Cruise, Pascoag; Dewire, Nasonville; Fales, Medway; Dorand, Albion; Fortier, Manville; Haggerty, Blackstone; Keach, Sr., Chepachet; Knapp, Wrentham; Kornicki, Bellingham; Mather, Glendale; Menard, Harrisville; Pon, Franklin; Tabor, No. Smithfield. At right of helmet, Angell, Cumberland Hill, and Logan, Millville, and below: Tancrell, Uxbridge.

Kent County Fire Brigade

From County Fire Headquarters, Tovil, Maidstone, Kent County (Eng.), comes the Third Annual Report of the Kent Fire Brigade, period April 1, 1950, to March 31, 1951. The document covers inventory of fire forces, communications, training, supplies, transport, water and other details. J. H. Fordham is Chief Officer of the Brigade.

All told, there were 6,111 calls received. It is noted that "walkie-talkie" radio sets were placed in commission in four of the Divisions.

EXPOSURES GIVE FIRE FIGHTERS A DIFFICULT TASK AT LAWRENCE

Wind Drives Flames from Burning Elevator Against Tenement Buildings

A Staff Report*

TWENTY-ONE persons were made homeless, fourteen firemen were injured, one requiring hospitalization, when fire destroyed the 50-year-old John Shea Co. warehouse and a four-story duplex dwelling and gutted another three-tenement building in Lawrence, Mass., on November 6th, last. Property damage was in excess of $100,000 and at one time the entire residential section of the city was threatened.

The fire started from an unknown cause shortly after 9:00 A.M. in hardwood sawdust stored on all three floors of the old, combustible warehouse. It was first noticed by employes who ran to the office of the president of the company, whereupon an alarm was sounded. By the time the men attempted to return to the warehouse, the heat was so intense they were unable to do so.

The Fire Department received the first alarm from Box 538, located at the warehouse, at 9:15 A.M. Seven minutes later a general alarm was transmitted bringing all available fire apparatus to the scene. Help was almost immediately requested from neighboring fire departments and, shortly, aid arrived from Methuen, Andover and North Andover. Soon after, Lowell sent two pumpers to the Central Fire Station in Lawrence, and Haverhill sent a pumper and ladder truck to the fire. Andover dispatched one piece to fill in at Lawrence Engine 3's Station and another to the fire. Methuen sent two pumpers to the fire and North Andover had one unit at the fire and another covering-in.

Water Supply Weak

According to Fire Chief Edward Retelle, when the first piece of fire apparatus reached the scene firemen hooked up deluge guns at the nearest hydrant, but when the water was turned on there was no appreciable flow of water. By that time the entire warehouse was a mass of flames and the multiple-residence units immediately to the front of it on Railroad street were just beginning to burn.

The heat from the fire became so intense that Chief Retelle feared the apparatus might be destroyed and he therefore ordered men and apparatus to new hydrant locations farther from the scene. Fire fighters were still hampered by lack of water.

Upon moving equipment to May street and hooking into hydrants there, running the lines through yards to the fire, pressure became more nearly normal, and just about in time.

The lack of water was later explained by Alderman J. R. Turrisi in the presence of Water Commissioner Nicholas J. Callahan. "There is a six inch low pressure main in that district," said the Alderman. "This six inch main feeds the sprinkler system in the Shea property, and with the sprinkler system in operation (as it was) it put quite a drain on the line." He added that it was a possibility the line inside the Shea property was destroyed or damaged, which would have affected the output of water to the fire department from the line on Railroad street, a six-inch main. The nearest high pressure main to the point of the fire is at West and Tremont streets. This was tapped to battle the flames. All of the low pressure mains in the district are fed by the 30-inch main coming down Haverhill street by gravity from the reservoir.

The Alderman said nine low pressure and one high pressure lines were used by firemen. The high pressure line, he explained, is a 12-inch main that also comes down Haverhill street from the reservoir. Every pump at the pumping station was placed in operation as soon as the seriousness of the blaze became known.

The building in which the fire started was built around 1900 and measured 150 feet in length and 60 feet in height. It had an elevator, or well, which extended 100 feet above the roof of the structure. A sawdust sifter weighing several tons was located at the top of the warehouse; this crashed through the building soon after the fire spread.

A high northeast wind fanned and flames and helped extend them to the double duplex building at 65-71 Railroad st. directly in front of the warehouse and about 25 feet distance. The fire swept up the rear of this frame building and soon spread inside. Fire whipped through high grass in the yard at the rear of a three-story tenement at 55-57 Railroad street, caught the rear piazza and swept upwards.

At 10:00 A.M., the radiated heat ignited three buildings on the opposite side of the street from the warehouse. Fire fighters wet these down and confined the damage to the exterior.

All houses exposed to the fire were evacuated and tenants of other dwellings were warned by police to be ready to leave.

At 9:50 A.M., Engine 3 of the Methuen force arrived with Captain W. S. Quinn in charge; Deputy Chief Herbert L. Reuter arrived soon after with Engine 4. The Methuen crews laid 1300 feet of hose. The Haverhill department arrived with two units in charge of Deputy Chief C. C. Borden.

Firemen bent every effort to prevent extension of the hot fire to the many multiple frame duplex tenements in the immediate area of the flaming warehouse. Heat made it impossible to get streams on the latter. A shift in the wind during the course of the fire helped save other nearby property. Chief Retelle called this an act of Providence. "If the wind hadn't shifted," he said, "I'm afraid that the entire row of houses on Railroad street would have been gutted."

The general alarm was sounded by Deputy Chief Frank J. Regan, first to arrive at the scene. Chief Retelle who was en route to the fire at the time, requested aid of surrounding towns in accordance with the mutual aid plan in

The hazards of exposures, as well as the importance of covering them, are well illustrated in the above picture. Flames from a burning elevator at Lawrence, Mass., are being driven against a row of tenements. The tenements were soon involved, but excellent work by the fire fighters soon brought the fire under control.

*Appreciation is extended to H. G. V. Day, Middletown, Mass., for helpful data submitted on this fire.

effect in the area. Radio was used to summon and direct incoming apparatus.

Captain Wm. J. Mains, Water Tower 1, was the most seriously injured of the firemen who were casualties. He received severe cuts and was taken to Lawrence General Hospital. A first aid station, set up at the scene, treated thirteen other firemen.

It was disclosed the warehouse was completely equipped with a sprinkler system and as related when this went into operation it greatly reduced the water pressure available to firemen.

Operations were directed by Chief Retelle, who paid great credit to the incoming fire forces for helping control the dangerous blaze.

NEW SAN ANTONIO BUS TERMINAL GUARDS AGAINST L. P. G. HAZARDS

Combustible Gas Alarm System Warns of Presence of Explosive Concentrations

USE of propane as a fuel for motor buses has created new problems in storing and handling this highly volatile compound which is a gas in normal atmosphere and a liquid under pressure. The successul and increasing utilization of LP as gas for household fuels has demonstrated that under proper safeguards it is no more dangerous than any other gas. However, storing the large quantities required for fueling buses and the frequent handling of the propane do pose a different problem.

In recognition of this, the San Antonio Transit Company, San Antonio, Texas, recently built new storage and maintenance facilities for its fleet of propane-fueled buses, designed for maximum safety to minimize fire and explosion hazards.

The transit company engaged the Hudson Engineeering Company, Houston, Texas, to assist in designing the new plant. The Fire Prevention and Engineering Bureau of Texas and the Health and Safety Division of the U. S. Bureau of Mines participated as consultants. Through their combined efforts, the bus company's new storage and maintenance facilities are said to be a "model" for this type of operation.

One of the chief problems of such an installation concerned a method for accurately detecting and reliably warning of combustible concentrations of propane in the atmosphere around storage tanks, piping, valves, fueling station, and repair pits. This problem was solved by the installation of multi-point combustible gas alarm systems developed by Mine Safety Appliances Company, Pittsburgh. Two separate systems are used—one to protect the outdoor storage and loading and unloading facilities and the other to serve the repair zone inside the modern steel and glass maintenance building which has a floor area of some 45,000 sq. ft.

General view of the outdoor bus parking area at San Antonio Transit Company's new terminal. In the center are the six 500-gallon propane tanks for storage of the liquefied petroleum gas used for fueling the buses. This parking area handles more than 300 buses.

These two combustible gas alarm systems continuously sample the atmosphere from eight different locations, analyze the samples and instantly warn when the gas-air mixtures reaches 40 per cent of the lower explosive limit. This enables personnel at the terminal to take immediate remedial action.

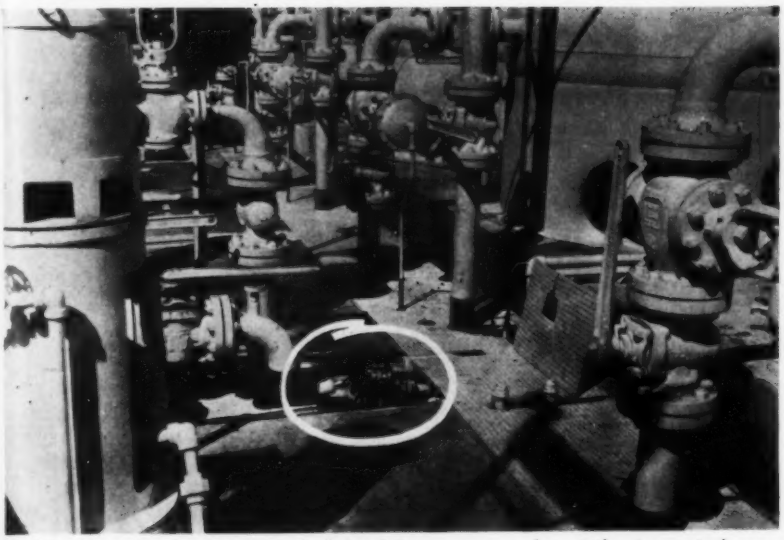
Four sampling lines run to each alarm panel. The system that protects the storage unloading area and fueling rack has one line running 240 ft. from the instrument to the six 5,000-gallon propane storage tanks. Tanks, valves and piping are inside a two and one-half foot high concrete fire wall. Another sampling head is located in the covered trench that contains fuel lines from the storage tanks and the fueling rack. This line is arranged to detect any leaks in the transmission piping. There is another line drawing samples from the propane unloading dock about 75 ft. from the instrument panel. The fourth line serves the bus-filling station.

Transport truck unloading station is protected by water fog sprinkler shown mounted on the reinforced concrete buffer. The station is several hundred feet from the storage tanks. At the left may be seen one of the air sampling tubes for the combustible gas alarm. The mechanical filter of the tube is circled. Trucks are grounded to prevent static sparks during unloading.

About 300 ft. west of the filling station, which is an outdoor canopy-covered area, is the service building and warehouse. The second four-point gas alarm samples air from repair pits in this building, where, it was explained, some propane might conceivably escape through leaks in carburetor lines or fittings, and pressure relief valves on the tanks. Fuel in tanks filled outdoors on a cold day might be liberated through pressure relief valves if the buses are moved inside and warmed up. Temperature rise causes the propane gas to expand. Because propane is so volatile and the fuel systems are under pressure, contamination of the atmosphere would occur faster than with fuels of lower volatility. For this reason, the automatic alarm system is designed to provide a warning long before the air becomes dangerously contaminated.

In cities where the weather is cold during the winter months, the need for a positive, instantaneous gas detection and alarm system is even greater than in warmer climates, due to the gas expansion problem.

The outdoor filling station at San Antonio is equipped with a water fog system that is manually operated from points close to the fueling rack. Water



To detect immediately any propane leaks in piping, pumps or valves at the storage tanks, one air sampling intake is located there. It is shown circled in the center of the photo in the trench. Propane gas is heavier than air and sampling points are located in low spots.

fog systems also are provided for the unloading dock and storage tanks. The terminal itself covers several acres. The area is uncrowded which is conducive to good housekeeping, an essential part of any well-balanced safety program. Buses are stored in the open.

The combustible gas alarm systems, which can be adapted for use with nearly all known combustible gases, are explosion-proof so they can be mounted in the hazardous area. In operation, air samples are drawn into the instrument and passed over one of two heated sensitized platform filaments which form a balanced electrical circuit. One filament, known as a compensator, is sealed in a cell containing uncontaminated air. Any combustibles present in the air sample are burned on contact with the other filament, known as the detector. This raises its temperature and its electrical resistance, unbalancing the circuit.

The degree to which this circuit is unbalanced is directly proportionate to the concentration of combustibles in the sample. This is measured by an indicating contact-making meter, which is designed so that when the needle reaches a predetermined point, a magnetic contact is closed to energize the alarm signal circuit. At the San Antonio installation, the alarm consists of a red light flash on the instrument panel, and a horn sounding. The instrument also can be arranged to automatically operate ventilation systems or to actuate any other mechanical equipment, including sprinklers.

Air samples are constantly drawn through the lines to the instrument by means of a turbo compressor. Indicator lights on the panel of the instrument show from which area the contaminated sample was taken.

Throughout the entire bus terminal, every other precaution is taken to safeguard against fires and explosions. All electrical equipment is explosion-proof and installed in accordance with Article 500 of the National Electric Code, regulations of the State of Texas and recommendations of the National Board of Fire Underwriters. The color identification code of the American Standards Association also is followed.

Bush Fires Plague Australia

Prolonged and excessively hot weather emphasized the bush fire season in Australia. The danger period was proclaimed from Nov. 16 to Nov. 26, forbidding the lighting of any open fires. Maximum penalty for so doing might be $1,000. Two men caught before Nov. 17 were fined $250 and $50, respectively, writes FIRE ENGINEERING'S Sydney correspondent Joseph Gunner.

In what is reported as the worst bush fires in Sydney's history, 22 dwellings in the outer suburbs of the city were burned; a church, plaster factory and scores of poultry houses and garages also were destroyed. In addition, a timber yard was burned at St. Marys, and a railway line badly damaged at Mt. Kiring-Gai.

At the height of the trouble, Sydney radio stations interrupted their regular radio programs to broadcast appeals for volunteers to fight the fires. The night sky to the north, south and west of the big city reflected the glow of the fires. Road and railway traffic was interrupted by the spreading blazes. On the 15th, every available fireman was fighting bush fires in the metropolitan area. A special detail of nine men at fire headquarters was required to attend to the fire calls, which at one stage averaged six a minute.

When a bush fire blew up the powder magazine at Lambton colliery, south of Newcastle, a miner was killed. He was one of a team of more than 20 miners who were helping to get explosives out of the magazine before fire reached it. He was the last man to leave the magazine. When he was 10 yards away a 45 miles-an-hour wind swept the flames to the magazine. The explosion hurled him against a tree. Most of the other men, although 100 yards away, were lifted from their feet as they ran.

One man collapsed and died from heat and exertion in fighting the fires. Terrified families fled before the spreading flames. A fully-loaded "goods" train was driven through a 100-yard wall of fire to escape encirclement. Some of the fire apparatus caught fire but the fires were put out.

More than 750 workmen and firemen from 13 fire brigades, on the 15th, successfully fought to save the 5 million industrial area of St. Marys from the bush fires.

Helicopter Lost in Costly Brush Fire

Ten thousand-acre brush fires are not so unusual in Southern California, but now and then the circumstances attending such fires are unusual, to say the least.

Such was the case with the blaze that nearly blackened 10,000 acres in the San Francisquito Canyon area last autumn.

In this particular episode, the results of careless handling of gasoline were nearly fatal to three men. Besides this

Railway workers using back-pack pumps on burning sleepers (ties) on the main South Coast railway line at Loftus, 16 miles from Sydney. A bush fire, one of several around Sydney in mid-November, swept across the line November 15 and set the sleepers on fire.

a USFS (United States Forest Service) lookout tower valued at several thousand dollars was reduced to ashes, a $27,000 helicopter went up in smoke and a pick-up truck was destroyed.

It all happened when the 'copter landed near the lookout tower to re-fuel, and the pick-up truck, loaded with a 150-gallon tank of gasoline, came up to supply the 'copter. After the plane landed, for some reason it was unable to take off. The area around the tower, 'copter and pick-up had previously been burned off to what was considered a safe distance. However, when the flames came roaring up Grass Mountain (elev. 4606 feet), the terrific heat exploded the sub-standard fuel tank on the pick-up, even though the vehicle was 100 feet from the fire itself.

It is disclosed that in violation of presentday accepted standards, the tank was not equipped with a vent to safely release internal vapor pressures, caused by the external heat, notwithstanding the fact that the tank was used to fuel fire equipment engaged in fighting forest fires.

The resulting fire forced the helicopter pilot, his mechanic and a Forest Service official, who served as flight officer in observing the fire from the aircraft, to make a break through the flames on foot to escape death. The USFS official was most seriously burned, received second-degree burns over a large part of his body. The other two men received painful first-degree burns.

Strangely enough, it is reported that two butane tanks, which were located beside the lookout tower, survived the fire without bursting.

Oakland Firemen Rescue Many

Thrilling rescues of panic-stricken and hysterical men, women and children, trapped by a five-alarm fire in a six-story apartment building, were made September 24 by Oakland, Calif., firemen. One woman was burned to death and six persons hospitalized, while many suffered from shock as a result of the fire. Only prompt action of fire fighters in raising ladders to windows saved many from leaping to their deaths.

All exits from the six-story brick apartment building at 12th and Grove streets were blocked by heavy smoke and flames. The first alarm for the fire was turned in at 6:07 P.M., and followed by seven minutes a false alarm of fire from a box only six blocks away. That arson might have been the cause was investigated by Fire Marshal James M. Sweeney, Jr., who later reported a cigarette dropped carelessly in the lobby may have been the cause of the blaze, however, he did not dismiss the possibility of arson.

The fire apparently started in the lobby, which is unlocked and unattended at night, and swept up the stairwell, the elevator shaft and garbage chute, carrying flames to all five floors above the stores, which are located on the first floor adjacent to the lobby.

Occupants smelled smoke about 5:45 A.M., and opened their doors to find the corridors filled with smoke and flame and their exit by fire escape and stairways cut off. Escape by windows was their only way out.

Some occupants made ropes of sheets and were about to slide them when firemen arrived and laddered the structure. Almost every window of the apartment building contained persons waiting for rescue as the first apparatus drove up. Second, third, fourth and fifth alarms were shot in within 10 minutes, bringing 22 pieces of apparatus and more than 100 firemen to the scene.

Fire fighters concentrated on the gigantic rescue effort, at first, ignoring the flames. At least 50 separate ladders were raised against the building in rapid time. Witnesses reported the rescuers removed at least two dozen children as well as many grown ups to safety by this route.

One tenant, a Policeman, was injured when he ran through the halls to awaken the tenants, and broke through a glass door to awaken a neighbor. A 76-year-old bedridden invalid was removed by ladder from the fifth floor. One fireman saved a man on the sixth floor who attempted to jump, even after he was safely on an extension ladder.

The building contains about nine apartments on each of the five floors above the stores. Fire Chief James H. Burke reported the fire under control by 7:00 A.M. Several fire fighters were injured in the operations—none seriously. Damage resulting from the fire was reported at $50,000.

An arsonist started a fire in the same building in April, 1937, by lighting newspapers in the hallway in the early morning hours, which threatened scores of occupants. The blaze was quickly extinguished, however.

Timely Post-Fire Report from Marshal Sweeney

The foregoing had been prepared for publication when a special report on this fire was received from James J. Sweeney, Jr., Fire Marshal, Fire Prevention Bureau, Oakland, Cal.

Marshal Sweeney's report throws added light on the foregoing report which was based on correspondents' contributions. For this reason we are pleased to publish most of Marshal Sweeney's communication.

The construction of the apartment is Type III: masonry exterior walls, interior wood floors, walls, underside of staircases and a considerable portion of the interior partitions were metal lath and plaster.

Upon arrival of the first firemen, the main stairway, the corridors of the top floor and lobby and hallway of the first floor were well involved.

Assistant Chief Manning Basch sent in the third, fourth and fifth alarms.

Engine Companies 1 and 32, first units responding, made direct leads to the lobby of the apartment-hotel and up the staircase. These were perhaps the most important leads made as they knocked down the main body of fire and retarded its spread. The men working up the stairway did so at considerable personal risk because of the unsafe condition of

Oakland, Cal., firemen save many by ladders at apartment fire.

Left: Fast laddering of burning apartment saved many lives as fire cut off all escape. The Department was highly praised for its operations. Right: With all escape save windows cut off, tenants of a six-story apartment house are picked out of windows by fire fighters responding on five alarms.

the stairway up which the fire had roared.

No. 1 Ladder, an 85-foot hydraulically-operated aerial, and No. 4 Ladder, a 65-foot aerial of the same type, went to work on the rescue problem. Chief Basch assigned personnel of engine companies to aid laddermen. Practically the entire complements of ladders were placed in service within a few minutes.

Firemen quickly controlled the hysteria of occupants which was so noticeable at the outset. Even those who had strung bedsheets and blankets from their windows and were about to slide obeyed the injunctions and commands of the firemen.

Of the 79 occupants of the building, 78 left the structure by way of fire department ladders or via fire escapes, escorted by firemen. The other occupant was found lifeless a few feet from the door opening onto the fire escape. She would have been saved had she remained in her room, or not delayed to dress.

Coolness and efficiency marked the work of the fire fighters. One particularly thrilling rescue was made under difficult circumstances. An aerial ladder was within a few feet of a sixth floor window when the panic-stricken occupant jumped to the ladder. The ladderman at the top of the ladder was agile and strong enough to grasp and hold the man. However, as he was adjusting the load of his charge one of the jacks supporting this aerial ladder slipped, causing the ladder to drop to one side, which in turn, threw the weight of the fireman's burden to one side. The result was that the burden started to slip from the fireman's grasp and rescuer and rescued were in imminent danger of falling.

Despite the handicap of working 65 feet in the air, under these conditions, the rescue was made.

It was fortunate the building was accessible on four sides, which facilitated rescue operations. Some hindrance, however, was encountered by overhead wires which interfered with laddering operations.

Although rescue took precedence, hose lines were placed in operation as rapidly as possible. Nor was ventilation overlooked.

Lines were coupled to standpipes and were operated on the different floors to kill the fire rising in the various shafts. Subsequently, 1½-inch hose lines were brought into play to extinguish the fire in concealed spaces.

Investigation disclosed that the fire originated in the lobby and apparently burned for hours, using up the oxygen, reaching its climax when it pushed out the front windows of the lobby.

Once again we find the open stairway as the hazardous weak point in multiple dwellings. This fire probably would have been limited to the first floor if the stairway had been enclosed.

No indications of arson were found. The eccentric youth who professed to starting the blaze later recanted his confession. The fact that at least one vagrant has been known to sleep in the lobby on different occasions tends to the probability that again carelessness had extracted its toll.

The lessons learned from this fire are the same age-old ones: occupancy separations such as existed between the hotel proper and the stores located on the first floor are worth their weight in gold in controlling the spread of the fire. Again it was proven there is no substitute for the enclosed stairway. The large open stairway was definitely the main factor in the rapid spread of the fire. Likewise it was demonstrated that stairways should have direct exterior exits and should not empty into hallways common to other stairways or vertical shafts. These facts were substantiated by this fire which caused over $100,000 in fire loss and, more important, occasioned the loss of a life.

A VOLUNTEER FIREMAN REVIEWS MEDITERRANEAN FIRE BRIGADES

Finds Room for Improvement in Apparatus and Methods; Lack of Water a big Handicap

By Lawrence Farrant

A GREEN stringbean of a sailor on the aircraft carrier Oriskany this fall was offered a job equal to fire chief in Izmir, second largest city of Turkey.

He was watching Turkish firemen extinguish a blaze that gutted the third story of a commercial building in downtown Izmir. Two men died at the fire.

The sailor said a few words to the Fire Chief who was watching the operation on the street below. The words were: "You fellows going in?"

The Chief answered, half-sarcastically, "In there? Do you think we're crazy—wait a minute, is that what you do in the United States?"

Andrew R. Alaways, 23-year-old seaman in the United States Navy, replied simply, "Yes."

"Let's talk about it," said the Chief.

Fire Chief Ibraham Gunay invited Alaways to his house for dinner. They talked firefighting problems, fire equipment, technique, training and pay. When dinner was over, the Chief said, "There's a job waiting for you here to train this department in American techniques as soon as you finish your hitch in the Navy. You'll go on the payroll at the same salary I get."

That's quite an offer for a young guy. Izmir is a growing city, around 40,000 population. Ships from all over the world put into the port. In August, the Izmir fairgrounds display agricultural and manufactured products from all of western Turkey.

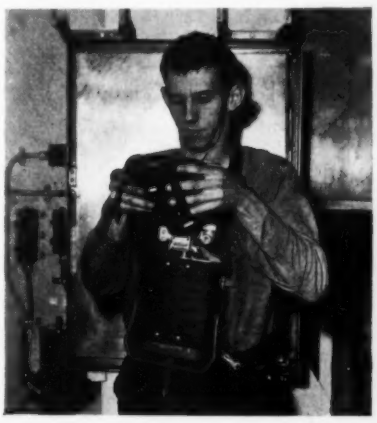
Three strategically-located firehouses provide protection for the city and its environs. The department employs about 75 men. The Fire Chief gets $200 a month plus quarters for his family in Fire Headquarters. Firefighting equipment is modern and well-kept.

As Alaways remembered it, Izmir equipment consisted of two squad pumpers, two tank pumpers, one 1938 Chrysler sedan Chief's car, one new jeep with a pump for the fire captain, one ladder truck with a 65-foot Magirus aerial, one Model-A Ford with a 50-foot Magirus aerial, three hearses and five ambulances.

"The Department takes care of the dead in the city as well as the fires," Alaways explained.

But Izmir technique in fighting fires lagged far behind their equipment. Firemen kept a respectable distance from flame. They never got scorched eyebrows. Instead, they played streams from outside the burning buildings. Water went through windows, hit the ceilings and, maybe, doused the fire. If the fire was in a closet or around a corner, it continued to burn. That's what happened when the two men died while Alaways wondered.

But why should anyone pick a young American sailor to train a professional fire department? Could it be that Alaways had given the Chief a line of malarkey? Or was it that the Chief just couldn't understand English?



U. S. Navy Photo
Andrew R. Alaways

Out in Sedro-Woolley in the State of Washington they'd tell you it was because Andy Alaways knows what he's talking about. Andy was the drillmaster of the Clear Lake Volunteer Fire Department, which provided fire protection to Sedro-Woolley, a town 60 miles north of Seattle and 40 miles from the Canadian border.

Alaways, with 14 to 16 other volunteers, used to respond to siren alarms of fire at Clear Lake before he joined the Navy as a recruit two years ago.

As a volunteer, he always kept his ear open for the 12 blasts of the siren. He attended the School of Fire Protection at Oklahoma Agricultural and Mechanical College in the fall of 1948 and the spring of 1950. There he learned about the pre-connected charged line in use at Stillwater, Okla., the operation of pumpers at the scene of the fire as it's done in Salina, Kans., the indirect application of water as practiced in Parkersburg, W. Va., and the use of wetting agents for which the Miami, Fla., department is known.

In the Navy, Alaways attended firefighting schools on his own time, not

waiting for the brass to make up their minds to send him. On authorized leaves, other sailors went home to see families and sweethearts. Alaways' true love was firefighting. On the Oriskany, he seemed to know more about fire protection devices than anyone else. Some of his suggestions for improvement were adopted aboard the ship.

This background and his thorough knowledge of equipment and procedure earned Alaways the offer from Chief Gunay. The Chief wanted to adopt some of the American methods in his own department.

In addition to Izmir, Alaways examined equipment and methods in fire departments of Athens in Greece, Tripoli in North Africa, Naples, Rome, La Spezia and Genoa in Italy, the island of Crete, the cities of Nice and Antibes in France, and Gibraltar, the British Crown Colony.

As Alaways saw it, most of these departments could use new equipment. What's even more important, most of them would like to buy suitable U. S. pumpers and trucks.

"In Tripoli," Alaways said, "the department is pathetic. They had one tank pumper and one 65-foot Magirus aerial. During the war, the Germans removed all efficient equipment. Since the war's end, no occupying nation was willing to put money into new rolling stock.

"But Libya will become independent on January 1, 1952. Then the newly-established government will probably be in the market for equipment.

"Meanwhile the department compared favorably with any other in morale. Working side by side were Christians, Moslems and Jews, dark-skinned and light-skinned."

By comparison, morale was low in the national fire service throughout Italy. Equipment was poor.

"Everything was shiny," Alaways said, "but they didn't have the tools and other accessories. The best rigs in the entire peninsula were kept in Rome, and they had been given to the Italians by the United States. And there's too much politics in the national service."

Genoa in northern Italy carried 600 to 700 men on its fire department rolls, an average of about one to 1,000 population. The Fire Chief in Genoa worked for less than $125 a month. Firemen got $50 and up.

On the southern coast of France, the Antibes fire department outshone most others for both progressive spirit and equipment. Antibes, a town of about 2,000, owned a six-wheel drive GMC tank pumper, with a 350-gallon portable pump, a 55-foot aerial ladder towed by an old coupe, a Ford squad pumper, with a 300-gallon-per-minute portable pump, and one war-surplus jeep. Ten paid firemen maintained equipment in first-class condition and knew how to handle fog and foam efficiently. The department looked forward to introduction of two-way radio within the near future.

Best department around the Mediterranean, according to Alaways, was in Gibraltar. This department superior in both tactics and equipment.

"Of all the cities I visited on the Oriskany Mediterranean cruise," Alaways said, "Gibraltar was the only one with a hydrant system. It was actually the only one with sufficient water and sufficient pressure. Water was collected from rainfall high on the slopes of the Rock, stored in reservoirs about midway up, and always ready for emergencies."

As a young fellow interested only in the actual fighting of fires, Alaways ignored investigating the financial capacities of communities. But his general report indicated there were potential markets for American firefighting equipment around the Mediterranean. More informed observers foresaw the possibility that American funds, appropriated for defense, might be used to finance such buying, once the Europeans were convinced of its value.

In areas friendly to the West in the Cold War, advice and training from American firefighting experts appeared to be welcome. This was particularly true in Turkey and Greece, two nations closest geographically to the Iron Curtain.

As for Alaways, he will still have to serve in the Navy another two or more years. When last heard from, he was on his way to Newfoundland. After a year there, he forecast, he may decide never to leave Sedro-Woolley again.

FATAL HUNTINGTON FIRE PROVIDES A LESSON - AND A MORAL

Fire-Trap Dwelling Permitted to Stand Despite Orders of Fire Department

Editor's Note: **The following acount, for which the editors are indebted to correspondent Warren D. Sanford of Huntington, W. Va., should give serious-minded fire protection and fire prevention engineers food for thought. As correspondent Sanford writes: "This is not the story of a big fire. Normally it would rate little more than a back page paragraph in the home town newspaper. Nor would the fact that five lives were lost attract widespread attention because such tragedies are only too common in this country. But the moral involved cannot be stressed too strongly and he doubts that a more perfect setting for a tragedy has ever been reported in FIRE ENGINEERING."**

AT 7:38 P.M., Sunday evening, Dec. 3, 1951, the Huntington fire alarm operator received a telephone report of a fire in 6½ Allen, just east of 9th street, that city. The usual first alarm assignment for this neighborhood of three engine, two ladder companies and the fire department ambulance was quickly on the fire ground. Because of threatened exposures, another engine company was called but this was not needed, the first-due companies quickly knocking down the blaze. Responding also were Fire Chief Floyd L. Crouse and Deputy Chief John W. Gallagher.

The building involved, an old two-story frame dwelling dating back two or three generations, had been removed from a previous more respectable neighborhood to its alley resting place. On its west side the structure cleared by about six inches the wall of the Hotel Huntington. This wall is of brick but opening above the roof of the old dwelling were two windows that provided hazardous exposures. On the other side of the dwelling is a one-story brick structure which also had seen better days.

The decrepit dwelling had come to lean heavily for support on this small brick structure which, in turn sought something on its east side to lean on, but here it was out of luck because to the east there was only a parking lot, which provided no support for an out-of-line brick wall. Opening had been cut into the brick structure in order to incorporate both buildings into one dwelling unit.

Flimsy enough at the outset, the old dwelling had been made even more so by the addition of combustible partitions of wood studding, chicken wire and paper cardboard, in order to extract the

These are the two buildings before the fire.

Interior view of the downstairs combination kitchen and bed room. In the foreground is the kerosene cooking stove where the fire started. Behind the stove is the bed upon which rests two badly burned bodies of men. And behind the bed is chicken wire upon which cardboard had been fastened for a partition. The other three bodies were found in a bedroom directly overhead.

last dollar of rental value.

None of this was in line with the American boasted standard of living, nor was it in line with fire inspection and safety laws, which prohibit the right of entry to private homes for purposes of fire inspection.

Only a fight, involving a stabbing in the old house, paved the way for the entrance of Chief Crouse or his inspectors. Then the Chief, who had been watching his chance, accompanied the police when they entered to investigate the fight. Not until then, was he able to observe the unsafe condition of the place and its hazards, and to issue an order condemning the two structures.

Unfortunately, here the law provides for legal delays and court appeals that either makes impossible or greatly delays its own enforcement. On October 2, 1950, the condemnation order was issued, directing those in charge of the estate which owned the buildings to tear them down. Inasmuch as previous attempts to enforce such orders had only resulted in owners resorting to the legal technicalities, delays and appeals, it was not considered wise to adopt a hard-boiled attitude with the property owners. However, the less stringent, "persuasive" efforts to induce compliance with the order came to naught; it remained for the fire and tragedy to suddenly and abruptly decide the matter. Throughout all these negotiations the Huntington Fire Department authorities worked in close collaboration with State Fire Marshal C. A. Roper of Charleston.

On the fatal Sunday, a kerosene cooking stove, whose burners had apparently become clogged, was being cleaned with kerosene; there had been set under the stove a pan of kerosene to catch the oil used for cleaning as it dropped from the stove. Over the stove a dried-out bed sheet hung from a clothes line. Little imagination is needed to picture what happened when a match was touched to the stove to light it.

Lying in bed in the same room near the stove were two men, both of whom were burned to death. A medical examiner later found indications of a heavy alcoholic content in their bodies. Upstairs, over the starting point of the fire, was a woman and her two grandchildren, aged two and four. They, too, died in the blaze. No alcohol however, was found in the woman's body. One of the men victims, it was reported, was paralyzed from the waist down with arthritis.

The fire quickly communicated from the stove to the bed and room furnishings, thence to the floor above. Firemen fought the blaze for three hours. During the fire the heat broke a window in the wall of the Hotel but firemen managed to confine the blaze to the dwellings although a liquor store, automobile club and another store were damaged by smoke and water.

The bodies of the two men were found about 8:25 P.M.; the first of the upstairs victims was located at about 9:10 P.M. and the third victim was located at 10:30 P.M.

Preliminary investigation by fire and police officials failed to disclose anything more than extreme carelessness and negligence.

The moral? It would seem that when a structure—whatever its nature and occupancy constitutes a hazard to the neighborhood and to its occupants, fire officials should be permitted to make inspection—and receive more than lip service in seeing that its safety recommendations are carried out.

Gas Blast Wrecks Dwelling

Frank Creamer, 53, veteran member of the Norwalk, Conn., Police Department, was killed on November 14, when an explosion caused by illuminating gas wrecked his home on Ponus Avenue, setting the building afire.

Dr. Harry S. Phillips, of Westport, Acting Medical Examiner for the Norwalk area during the absence of Dr. William H. McMahon, said suicide was indicated in Officer Creamer's death, although the victim was killed by the explosion rather than by asphyxiation from gas fumes. A note found in the demolished kitchen of the Creamer home gave burial instructions to Robert, the policeman's son.

The explosion rocked the Broad River and Ponus Avenue area. One side of the building was ripped off, the first floor torn up and the porch knocked from its foundation. The policeman's body was removed from the wreckage in the kitchen by two Norwalk policemen, neighbors of Mr. Creamer.

The force of the explosion drove one side of the one and one-half story frame building against a nearby house which was damaged by the timbers. Firemen, under command of Fire Chief Charles A. Volk, battled the flames for more than an hour before bringing them under control. Officials said the entire house had been filled with fumes from six open

Frank Creamer, veteran member of the Norwalk, Conn., Police Department, was killed on November 14 when his home was blown apart in a gas explosion. The house caught fire following the explosion and gave firemen an hour's battle before it was subdued.

gas jets on the kitchen stove.

A sheet, fire officials said, hung across the entrance to the kitchen was presumed by firemen to have been placed there by Mr. Creamer, to prevent the fumes from escaping. Fire Chief Volk, who said he believed the blast was set off by a spark from an electric oil burner, estimated the damage to be in excess of $10,000.—Tom Magner.

PHILADELPHIA LUMBER YARD FIRE THREATENS WIDE DESTRUCTION

Six-Alarm Blaze Injures 25 Firemen; Causes $700,000 Damage

A Staff Report

REVIEWING the near-conflagrations of the year just closed, few came so near to disaster, and tried the resources and courage of fire fighters, as the 6-alarm blaze that raced through the yard and buildings of the Lumber & Millwork Co., of Philadelphia, Pa. on August 28, 1951.

Before that fire was controlled, 25 firemen had been felled, many others of the force of 200 that fought the blaze had been affected by smoke, and damage in excess of $700,000 had been done to priceless stocks of high priority lumber.

The yard is on the east side of York road, from Butler street to Pike, and is bordered on the north by a depressed freight line of the Reading Co., which separates it from the Philadelphia Transit Co.'s Luzerne depot, world's largest trolley barn. Facing the yard are rows of residences of the type common to Quaker City. The Company's offices are on the west side of York road. Adjoining the yard on the east side of York and Butler is the building of Welsh Bros., fuel dealers. This, with the offices of the company, was wrecked as was another buiding on Camac street. A row of homes in the 1200 block of Butler street was scorched.

What caused the fire has not been determined but it apparently originated in dried grass outside the wooden fence enclosing the lumber yard. Two witnesses saw the flames from a railroad overpass and ran to notify the yard watchman, who turned in the first alarm. This was received by the Philadelphia Fire Alarm Headquarters at 5:21 P.M.

Firemen answering this call found flames blanketing the yard while they were stretching in.

So serious was the outlook at that time that the next four alarms were rung in within six minutes of the first—at 5:24, 5:25, 5:26 and 5:27 P.M. The sixth and special alarm was clocked at 6:06 P.M., bringing two companies from outlying districts: Engine 71 from Cottman and Loretto aves. and Engine 37 from Highland ave. and Shawnee st. At the height of the blaze more than 30 fire companies, with over 200 men, were at the scene, together with more than 150 police and special details of traffic officers and squads to control the estimated 10,000 persons, and countless vehicles, that jammed traffic over a wide area. Eleven trolley lines were tied up completely for five hours when wires leading into the barns burned.

The heat kept fire fighters on opposite sides of the chasm formed by the railroad cut. They looped streams of water across the ravine onto the blaze, telegraph poles besides them catching fire as they worked.

The heat sent nearby residents scattering, some taking their possessions with them. Bits of charred wood were carried for miles, showering parts of Germantown. A spark drifted into a bedroom window at the home of Mrs. Emma Kimble on 13th street above Butler, and set fire to her bed. Another set fire to an awning at 13th, above Pike. A two-story house on York road opposite the lumber yard was badly damaged by flames. Householders in the 3800 block of Camac above Butler remained on their roofs with brooms and buckets throughout the blaze fighting hot embers that rained down.

Blazing lumber glows incandescently at one of Philadelphia's largest lumber yards as firemen set up hose lines to battle the conflagration.

Firemen battle blaze that engulfed the yard office building of the Lumber and Millwork Co. of Philadelphia.

The number of firemen overcome might have been greater except for the use of oxygen units set up on each side of the blaze. Rescue companies did effective work in this connection. At first aid stations the squads set up stretchers to which firemen working in the dense smoke could come for brief rest and reviving oxygen.

Red cross first aid units and members of nursing corps were alerted and hastened to the scene. Radio proved its value in many ways in both the fire fighting operations and in controlling traffic and crowds.

At one stage, firemen were reported hampered in their work by lack of ad-

equate water pressure. Several hose lines had to be abandoned and were destroyed. Three steel boxcars of the Reading Co. on sidings were reduced by the intense heat to twisted wreckage. The tracks also were buckled.

Early in the fire, volunteers ran a number of expensive fork-lift trucks and other lumber carriers to safety. Still other volunteers and certain Civilian Defense Corps members assisted in the bucket brigades.

Hard-pressed firefighters fought the threatening blaze for seven hours.

SIMULTANEOUS FIRES FATAL TO FOUR IN CINCINNATI

Department Makes Many Rescues at Suspicious Tenement Blaze

A Staff Report

AT 2:21 A.M. on the morning of Oct. 28, 1951, there started a series of fires, all within a narrow area in Cincinnati which resulted in the deaths of four persons and injuries to ten others, seven of whom were badly hurt. The fires, coming in close proximity, and the mystery surounding the origin of at least one, the major blaze, gave rise to the belief that a pyromaniac was at work.

The worst fire, at 1101-1103 Harrison, at Brighton Corner, an area with almost every type of occupancy, including 3rd and 4th class tenements, started shortly after 3:00 A.M. in the rear of the New Brighton Cafe, a nondescript bar, from a cause not immediately determined. The building involved is a 4-story and attic, brick joist structure, with cafe and drug store on the ground floor, and 15 apartments above, housing 40 tenants.

Just before this incident, at 2:21 A.M., Box 3293 was pulled for a fire in a tenement and store building at 1165 Harrison, a block west of this main blaze. This curtain-raiser to the tragedy that followed was a tough fire to fight, but Marshal H. Geslbracht and his men had it under control and some of the apparatus had picked up and was returning to quarters when the second fire was discovered.

Members of one of these units, Engine 29, in passing the property at 1101 Harrison, discovered the new fire and immediately stopped and went into action. The members of this Company made a number of spectacular rescues. Coincidently, a driver of a radio taxicab had only moments before noticed the fire and radioed an alarm to his dispatcher who in turn notified the Cincinnati fire alarm office.

One man from Engine 29 was ordered to pull Box 3295, not knowing the alarm was already in, while his fellow-firefighters stretched in. At this time there was already plenty of smoke and some tenants were in windows calling for help.

Marshal Dan Kummer, filling in for Marshal Geslbracht, who was still engaged at the initial blaze at 1165 Harrison, noting the situation immediately ordered an additional aerial ladder. One minute later he called for a third alarm which brought 12 engine companies, 3 hose tenders, 4 aerials, the water tower, the ambulance and rescue squad, under command of Acting Chief Leo J. Kuhn (Chief B. J. Houston being on vacation). Assistant Chief Edw. Avey and Acting Assistant Chief Chas. Bose, Chief of the Salvage Corps, H. C. Williams, and Assistant Chief John Frank, commanding all the salvage corps companies, also responded.

Inasmuch as the fire at 1165 Harrison had claimed all the first alarm units for this location (with the exception of Engine 29, not yet reported back in service) Dispatcher V. F. Grote and Operator W. K. Rees filled in at fire alarm headquarters, the quota for the second blaze, with three engines, a ladder truck and a Marshal. By the time the third alarm was in, two of the units from the first fire had reported in service, and were sent to the new breakout.

Trapped by the heavy smoke and fire, a man and his wife, and 8-year-old daughter were suffocated in their beds on the fourth floor before firemen could reach them. A 57-year-old woman lost her life when she dove from a third floor window, striking the wall of the next building, from which she caromed into a life net, hitting the rim of the net, and breaking it, and slightly injuring one of the firemen holding it. Prior to her leap, several other persons made successful jumps into the net.

Panic caused another man to jump from a third floor ledge just as Capt. Frank Herbert of Engine 29 had almost reached him on a ladder. This victim, who leaped over the head of the officer to the sidewalk, fractured both legs and received other injuries.

Another married couple and their tiny

Left: One youth, not waiting for firemen, starts down extension ladder as others wait anxiously. Many were saved by nets during three-alarm fire. Right: Most serious of a chain of tenement fires occurring within minutes of each other brought death to four, injuries to many others. Note wires and poles that handicapped rescue efforts.

daughter suffered serious burns and smoke inhalation, while a 17-year-old boy and a married couple received burns and suffered smoke poisoning. Several other tenants were injured to lesser degree.

More than 35 persons were in the building when the fire broke out. Firemen, who quickly laddered the structure, and pushed their way up the stairways, led many to safety through smoke-filled halls. Others were helped out windows and down ladders, and still others were caught in the life nets. A number of fire fighters received cuts and were affected by the heavy smoke while engaged in the rescue operations, and in getting water on the fire.

The blaze originated in the first floor hallway and spread quickly upward where it mushroomed. Many pets were killed by the spread of the flames.

While this blaze was in progress, still another fire was reported at 5:50 A.M., at 1179 Harrison, a block and-a-half away. This also was in a tenement, the ground floor of which was occupied by a dry cleaner. A full alarm assignment was dispatched to this fire. It proved a trifling outbreak in the second floor apartment. Firemen quickly quelled it but because of the close similarity between it and the other fires, called in the Arson Squad. However, it was disclosed that the cause of this outbreak was a mop, found burning in a hallway.

Firemen remained in action at the major fatal blaze over seven hours. Although not ignoring the possibility of arson, investigators were inclined to asign the cause of this fire to smokers, among the transients who had made a habit of sleeping in the first-floor hallway of the old apartment building.

Five Injured in Apparatus Crash

Five persons, including four members of the Waterbury, Conn., Fire Department, were injured on November 2, in a collision between an automobile and a hook and ladder truck responding to a false alarm.

Fire Chief Francis Scully said that when firemen under his command reached the scene, a warehouse which once had been a city school, they could find no sign of a fire. Chief Scully quoted persons working in the building as saying they knew of no fire, nor did they know who had summoned the Fire Department.

The building had been the focus of political controversy in the November city election campaign, with the Democrats accusing the Republican administration of extravagance in remodeling the old school building.

The accident, a grinding, ripping one, occurred at the intersection of Washington and Baldwin Streets in a hilly section of Waterbury, and the scene of at least two other accidents involving fire apparatus and automobiles

Taken to St. Mary's Hospital after the crash were Battalion Chief James O'Donnell, skull injury; Privates Edward D. Courtney, chest and arm injuries; Thomas Conway, leg and knee injuries; James Gilland, multiple injuries, and Robert B. Bertoletti, multiple injuries. Bertoletti was identified by police as driver of the automobile.

The automobile was demolished by the force of the collision. The hook and ladder truck, its front end badly damaged, sideswiped three parked automobiles after the collision and then became jammed between the iron fence, in front of Washington School, and a public utility pole.

A few years ago Chief Scully was forced to guide his car into the iron fence to avoid a collision at the same traffic light. About 12 years ago, five Waterbury firemen were injured, one fatally, in another collision in the same vicinity.

TOM MAGNER

Council Bluff Has Surge in "Set" Fires

The Council Bluff, Iowa, area witnessed a serious increase in the number of set fires in the period January through November, 1951.

A 16-year-old boy who "likes to assist firemen" confessed to setting 16 fires in the city during the past year, after questioning by fire department officials and E. J. Stebbins, Iowa assistant state fire marshal. "I like to set fires" he said in a signed statement "because I like to assist firemen in putting them out."

The boy would receive local newspapers for delivery at a fire station, and would put in his spare time loafing at this station. There seemed to be many fires in this particular locality without any apparent reason for them, and this lad would be either at the fire station when the alarm came in, or would arrive at the fire in time to help the firemen. He was a very hard worker at the fires, according to Fire Chief Waldo Merrill and would follow the company back to the station and help reload the hose.

The boy was suspected but no one was found who could place him at the scene of the fire at the time of its start. On a hunch, Captain James Burke, who was appointed Chief of the Department's newly-created Fire Prevention Bureau, in September 1, 1951, the boy was picked up for questioning about an unexplained fire in the Thomas Jefferson High School, after which he confessed. It was disclosed that he used a blow torch on the high school door.

Juvenile authorities took charge of the youth and inasmuch as the boy's family was leaving the city for Eugene, Ore., the court permitted him to depart with his folks. The youth confessed to setting fire to two houses (one twice), three sheds (one twice), three cars and six garages.

Series of Fires in Opposite End of Town

A series of unexplained fires continued on the other side of Council Bluffs. One most destructive of which was in the First Presbyterian Church in September, 1950.

Inspector Burke became curious about a 22-year-old man after he saw him acting suspiciously during the course of a fire in the Goodwill Industries building on Nov. 15 last. This man was taken across the street to a police station for questioning, with particular reference to the church fire. Following this questioning, he was given a psychiatric examination after which a "feeble minded" complaint was filed against him, when he admitted setting the church fire.

Medical authorities declared that the man has a "mental age of 5 or 6 years" but was telling the truth about the fires which he admitted setting. These totaled about 10 in all. In addition, he admitted to turning in many false alarms during the past 15 months. The examination included the use of "truth serum."

Authorities sought to connect this arsonist with the $250,000 Katelman Building fire of November, 1950.

In explanation of his acts, the confessed arsonist said in a signed statement he obtained a sexual satisfaction in watching the fires. Chief Merrill and Inspector Burke said the prisoner entered the church through the front door, passed through the sanctuary, forced a door into the pastor's study, rifled the desk drawers and tore pages out of books to start the fire.

Inspector Burke, who is credited with running down these arsonists, joined the Fire Department on July 1, 1938. He served in the Seebees 1942 to 1945. According to Chief Merrill, picking up two persons in one month for starting fires is something unusual for his department.

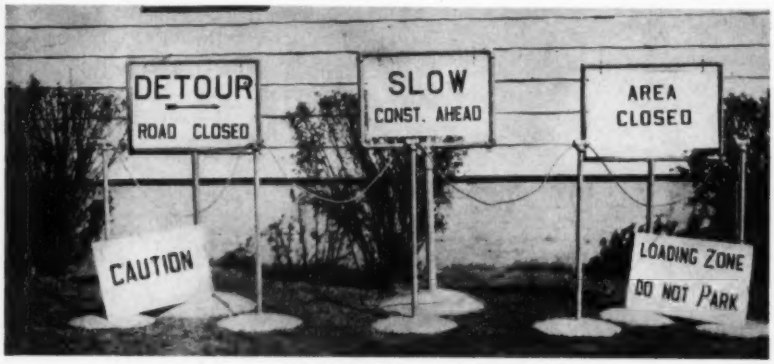
Courtesy Waterbury Republican & American

Accident scene in which an aerial ladder truck and a sedan collided at Waterbury, Conn., on November 2. Five persons, four of them firemen, were injured and taken to a hospital. The apparatus was on its way to what subsequently proved to be a false alarm. The fire apparatus struck two parked cars and a utility pole. Above photo shows a Waterbury Fire Department officer inspecting the crash as a civilian looks on.

Short Cuts and Gadgets

MADDOX BELIEVES IN SIGNS

One of our ubiquitous contributors, Frank Maddox, who is Fire Chief at the Veterans Hospital, Walla Walla, Wash., has an offering which might find use in other fire forces, and which he describes herein (see also accompanying picture). He writes:



For a number of years at this hospital there has been a real need for portable traffic stands and signs to serve as warning signals for unexpected emergencies. Insufficient funds and red tape made it impossible to purchase stands and make signs for every occasion. Therefore, it became necessary for the Chief of the Protective unit to devise some method to care for this problem.

Discarded sheet metal, 1 in. and 1½ in. black iron pipe, and disks from disk plows were used for this project. Thirty inches of 1½ in. black iron pipe was welded on top of the disk, which is about 22 in. diameter. A frame 18½ x 26½ in. ID was made from 1 in. black iron pipe and welded on top of the 30 in. 1½ in. pipe. Holes were drilled on top side for eye-bolts to which the sign will hang.

Inside the metal frame, a portable metal sign will hang from eye-bolts which will allow the sign to swing to offset any wind resistance on the stand. Lettering may be used on both sides of the sign, if so desired. The signs are interchangeable, depending upon the situation for which they are desired.

The above type of stands and signs are now being used for traffic control at the Veterans Hospital, Walla Walla. Wash. Their use has resulted in an approximate saving of $15 for each stand.

* * *

KEY TO FIRE LOSSES IN CARD FILE

The above heading of an interesting news story about an idea adopted by the Stockton, Calif., Fire Department, contributed by Arthur E. Buss, Chairman Fire Prevention Committee, Escalon, Calif., Volunteer Fire Department is worth passing on to the fied.

More than 400 local business firms and commercial establishments are members of the Stockton Fire Department "key system," as it is called. The key system is designed to cut down secondary losses at fires which are sometimes even greater than the fire damage itself.

Every fireman knows how often he is called on an alarm that amounts to nothing more than a smoke scare from a trivial fire. If his men have to force their way through an expensive front door of tempered plate glass, for example, the resulting damage may conceivably be much greater than the minor loss from the smoke and fire itself.

The key system, according to Stockton's Fire Chief Lyle Stevenson, is a simple but effective way of gaining entrance to a building, yet every precaution is taken to protect the person or business that turns over a key to the department. Despite the fast, simple method firemen have of gaining entrance to a building, an elaborate system of protecting business operators against misuse of their keys is followed.

The keys are carried on the piece of apparatus that is first due at the scene of a fire. They are in sealed containers and the keys are also sealed onto a rod in the carrying compartment. If one is needed, the officer in charge of the first company to arrive first requests the fire alarm station for the number corresponding to the address. This is given him by radio, and the officer cuts the seal in the compartment. He then determines which pocket of 20 keys he wants and removes them from the rod by cutting the second seal. It is then a simple process to determine the correct key through the number given by the fire alarm office.

In the event a packet of keys should fall into the hands of somebody trying to appropriate them for unlawful purposes, they would be valueless since each key carries only a number. It is necessary to go through the fire alarm office to determine the address for which it corresponds, the Chief points out.

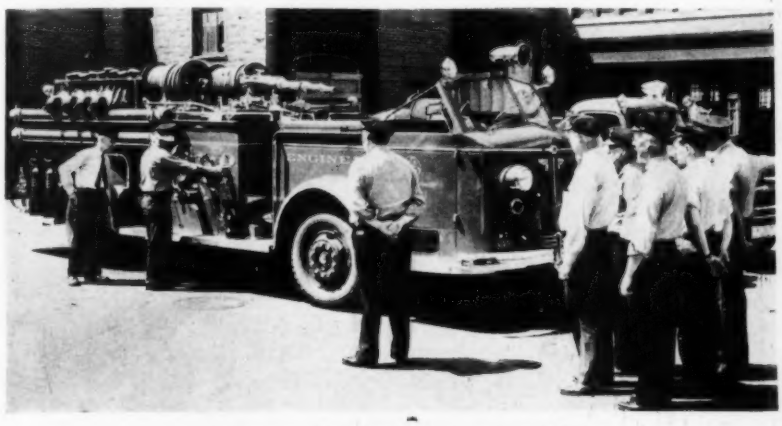
After a key is used, it is again placed on a closed steel ring, returned to its proper place with a special fire department seal, and the compartment itself again sealed.

Chief officers are the only fire department personnel who have access to the special sealing equipment. Each company officer is required to inspect the sealed compartment at the start of his tour of duty and make a report on his daily record sheet.

The Chief points out that the system is very efficient, especially during the night or on Sundays and holidays. The card that carries a key number also lists, in order, executive personnel who are to be notified in an emergency.

An unusual use of the system occurred when a Main street clothing store operator lost the key to his establishment. He was able to enter his store with the fire department key, after fully identifying himself to the authorities. "I don't know what greater precautions can be taken to protect the property of persons who turn over a key to us," said Chief Stevenson. "No single individual could appropriate a key for an illegal use. If one was taken it would only be a short time before it would be reported."

Firms desiring to join in the department's key system file a request with the Central Fire Alarm Station. A chief officer or member of the fire prevention bureau picks up the key. Fire alarms are broadcast to all fire stations over the amplifiers something like this: *"Attention all companies; there is a fire at* 000 *E. Main."* The fire alarm operator then turns to a little card file on his desk, draws out a card for "000 E. Main" and in a matter of seconds the fire fighters are in the building, without having to use an axe or battering ram or other forcible entry tool.



G. E. Company, Pittsfield, Firemen Get Blindfold Test

Fire protection facilities at the Pittsfield, Mass., plant of the General Electric Company are checked and double-checked, to make it ready for any emergency at all hours. A four-hour drill, including the "blindfold test" as pictured above, is held on the first Saturday of each month.—Tom Magner.

FALSE ALARMS

A country man came to Boston to visit some relatives and to see the sights. He remained until patience on the part of his hosts, a married couple, ceased to be a virtue.

"Don't you think, my dear fellow," remarked the husband one day, "that your wife and children must miss you?"

"Hadn't thought of that," was the calm reply. "Thanks for the suggestion; I'll send for them."

I'll just fine you for speeding today, but next time it'll be jail.

I get it. Fine today-cooler tomorrow!

Johnny Johnson, full of gin,
At three a.m. came stumbling in.
His wife was large, poor John was small . . .
John's still plastered—on the wall.

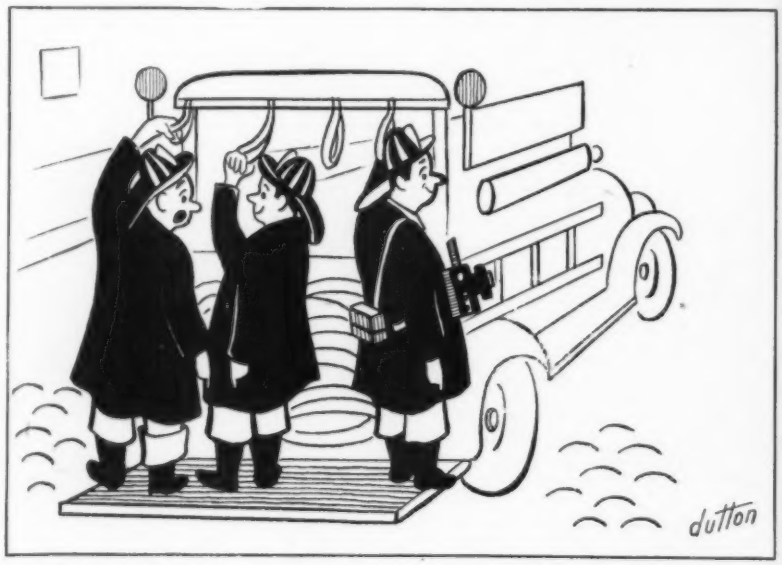
When Noah sailed the waters blue
He had his troubles, same as you,
For forty days he drove the Ark
Before he found a place to park.

I've decided to get a divorce. My wife hasn't spoken to me in six months.

Better think again. Wives like that are hard to find.

If you drink a glass of water every morning for 1,200 months, you will live to be 100 years old.

A farmer and his wife entered a taxi and told the driver where they wanted to go. He raced off wildly, went careening down the street, swaying, bumping and giving them several anxious moments. Noticing their concern, he shouted over his shoulder.



"Swell set-up! That new volunteer is also free-lance photographer for the press!"

"Don't worry, folks, I ain't going to land in no hospital, especially after spending a year in one overseas."

"How dreadful," answered the farm wife. "You certainly must have been seriously wounded."

"Not at all," replied the cabbie nonchalantly. "Never got a scratch. I was a mental case."

The motorist pulled up in front of a ramshackle cabin on the side of a Tennessee hill and inquired of the man sitting on the front porch: "Can you tell me if there is a fellow named 'Big Joe' who lives near here?"

"Nope," was the hillbilly's laconic answer.

"Well, where can I find his neighbor, 'Long Sam'," asked the motorist.

"I'm 'Long Sam'!"

"But they told me that 'Big Joe' lived within gunshot of you?"

"That's right," drawled the mountaineer. "He did!"

The government has issued a prohibition against the use of natural rubber in, among other things, feminine "falsies," which make women seem to be, in some respects, what they ain't.

This, one might say, gives government sanction to the saying: Honesty is the bust policy.

Teacher was attempting to make the arithmetic lesson a trifle more palatable by using personalized examples.

"Now, Junior, if you found $5 in one pocket and $7.50 in the other, what would you say you had?"

"Somebody else's pants!"

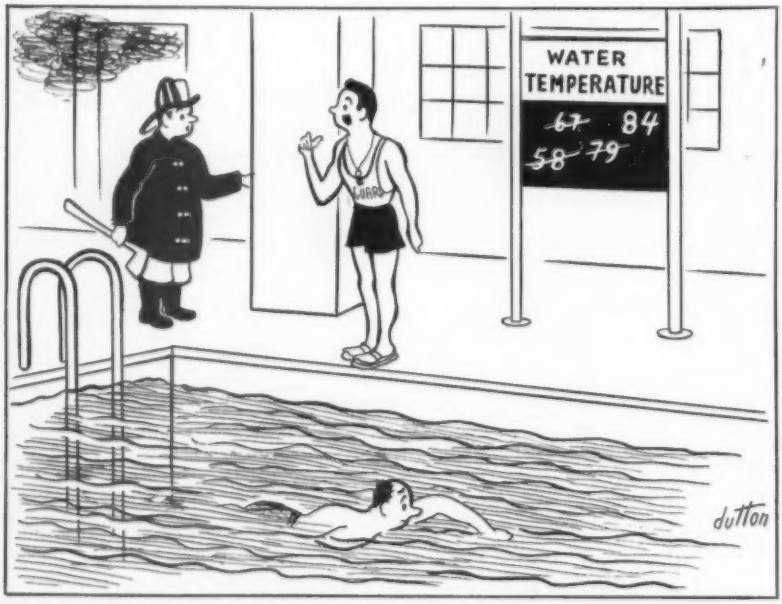
First Fireman: "What did the doctor say was wrong with you, Pete?"

Second Fireman: "Well, he didn't come right out and say positively. Just told me I can't eat this, can't eat that; can't drink this, can't do that—I reckon you'd call it a bad case of 'Can't sir' !"

Progressive

She first married a millionaire, then an actor, then a preacher, then an undertaker.

One for the money, two for the show, three to get ready and four to go.



"I was beginning to lose faith in the thermometer!"

Slugging it out...

When you have to deliver the heavy punches, it's best if you have Eureka Hose. It gives you maximum nozzle pressure with minimum friction loss, does not writhe or serpentine. Other reasons for Eureka's superiority:

SMOOTH-INTERIOR FILLER PLY, an exclusive Eureka development, prevents "washboarding" of rubber lining, eliminates an increase in pump pressure.

BALANCED-WEAVE CONSTRUCTION, in both multiple-woven and double-jacket hose, prevents dangerous writhing and twisting under high pressures.

MILDEW-PROOFING: Double-jacket hose can be furnished antiseptically treated or wax and gum treated to prevent mildew and rot.

BOMB-TESTED RUBBER LINING guarantees longer wear.

"For greater protection to life and property"

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Now all Philadelphia firemen get 2-way radio coverage from either the main station or the new auxiliary station.

Does your city need this protection?

New auxiliary station operates four 250-watt transmitters, two channels for police, two for fire.

Two easy-to-operate consoles route calls to fire and police apparatus all over Philadelphia.

New Philadelphia 2-way radio center controls police, fire, civil defense. Provides radio coverage for any emergency.

New station remote from downtown area

Philadelphia is a *safer* city now, thanks to a new RCA 2-way radio center recently established in West Philadelphia, four miles from the heart of the city. Acting as an auxiliary to the main control center at City Hall, this new installation will provide *emergency* 2-way communications with mobile police and fire units. It will also serve as control center for civil defense.

Two-station coverage gives double protection

Both the main station and this new auxiliary station operate on the same frequency. If one fails, the other takes over. So Philadelphia is assured of *extra* safety in emergencies. It's all typical of RCA 2-way radio at work . . . making things safer and more efficient wherever it's used.

Is your city protected by 2-way radio?

Radio coverage of police, fire, and emergency vehicles is almost mandatory in these troubled times. And even in day-to-day operations, it can quickly save your taxpayers far more than it costs.

RCA radio easy to install-operate-maintain

Look into RCA radio for 2-way coverage in *your* city. Mobile units are compact, lightweight . . . easy to install and maintain. Performance exceeds FCC requirements. Designed and backed by RCA, world leader in radio. Nation-wide service available through RCA Service Company.

Get full story for your city—now

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Dept. 50A
Camden, N. J.

Please send me your big, new, free, illustrated booklet, "RCA 2-way Radio for Public Safety."

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Position_____

Address_____

City_____ State_____

RCA RADIO CORPORATION of AMERICA

World Wide Fire News

By Roi B. Woolley

Recent Australia Fires Prove Costly

Hindrance to the defense effort resulted from a fire that destroyed much of the Lincoln Electric Company Pty., Ltd., Euston Rd., Sydney, Australia, in late summer. The company reportedly supplies 50% of the Commonwealth's total demands for heavy electrical equipment and is a subsidiary of the American firm. The fire, which caused damage of over $750,000, was discovered by a factory worker at 8:50 P.M. in the roof area. Fire Brigades from Headquarters, George Street W., Newtown, Redfern and Waterloo fought the fire for some time but could not prevent destruction of one-third of the factory.

Fire in the No. 11 store of the Australian Naval Stores Depot, Randwick, Sydney, Australia, destroyed a costly stock of replacement instruments for the Navy, with property loss estimated at $1,000,000. Guards at the installation held up reporters and photographers but it is understood the "hut" in which the fire occurred measured 300 ft. long by 240 feet wide, and is one of 19 similar structures. Within 15 minutes of the discovery of the fire, flames were leaping 150 feet into the air. Fire Brigades from Headquarters, Randwick, Matraville, George Street W., Newton and Waterloo fought the blaze in the highly restricted area.

Two big suburban factory fires in Lilyfield and Belmore, Australia, caused $300,000 damage and gave firemen hours of work. The first broke out at 3:15 A.M. in the York Confectionery Co., Lilyfield, and gutted the plant's second floor. Cause was blamed on a short circuit. The factory watchman fought the fire with hand extinguishers until arrival of firemen from Headquarters, Stanmore, Balmain, Glove, and Leichardt. The fire was reported under control at 5:00 A.M.

At 11:30 A.M., families in the neighborhood fled their homes when a ball of fire rose 100 feet from a storage structure containing burning chemicals of the Maclac Chemical Products Co., Belmore. Blamed on spontaneous ignition of nitro-cellulose in some 30 drums stored in the building, the fire destroyed it and the chemicals. Loss was estimated at $50,000. Two employees fought this fire also, using foam extinguishers, until the arrival of the Fire Brigades from Kogarah, Marrickville, Stanmore, Campsie, and Lakemba. The fire was controlled at 12:30 P.M.

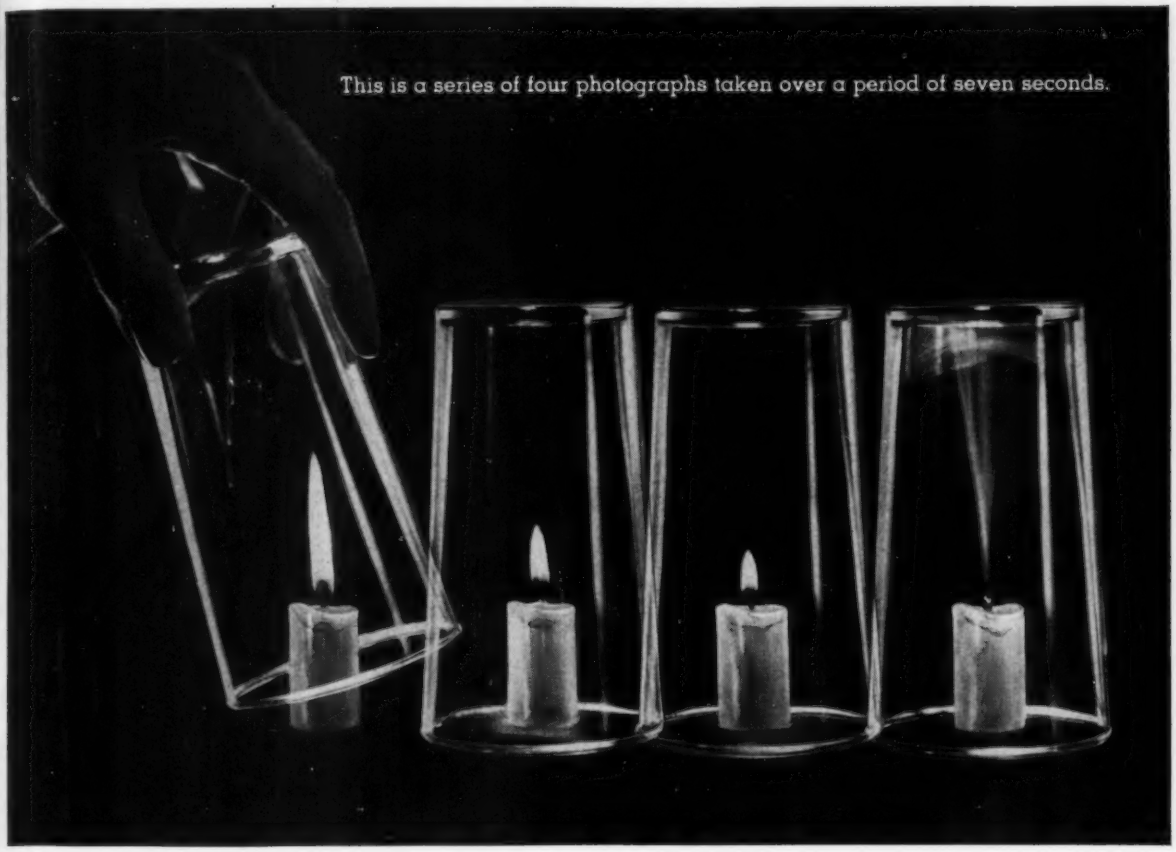
JOSEPH GUNNER, Sydney

* * *

Oil Slick Fire Burns Ship and Wharf

A thick coating of oil, believed released from a tanker discharging at an oil terminal near Mort's Dock, Sydney, Australia, on Nov. 1, last, was ignited, apparently by a spark from welding operations, and the resulting fire badly damaged the collier Corrimal, and the old Sheerlegs Wharf at the dockyard.

About 200 men working on the collier, which was being refitted, and on the dock, fled for safety as flames rose high on the pier. The sea-borne-oil burned slowly for a few minutes than burst into a wall of flame which swept rapidly



A good way to put out fire

Without oxygen fire dies. When you place a glass tumbler over a candle flame, the oxygen supply is cut off and the flame smothers in a matter of seconds. When you have a fire in your plant, a Kidde CO_2 Extinguishing System goes to work in much the same way.

A thick blanket of Carbon Dioxide pours out of the Kidde Multijet Nozzles. It dilutes the oxygen around the flame . . . and the fire is *out!*

You can protect one or more spaces with a Kidde system. Kidde fire detectors stand 24-hour guard in every space, ready to trigger the system *automatically* at the first sign of flame.

You'll find a Kidde system effective in guarding many of the fire hazards you encounter. Our engineers will be glad to work with you on any problems.

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Kidde

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Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

through the timbers of the wharf above the water. The heat exploded bottles of acetylene gas, used by welders, and pieces of shattered containers fell on pier and collier like shrapnel. Those workers who could do so jumped from the Corrimal to the wharf and fled with oil-fed flames just behind them. Dozens of them, oblivious to cuts and scratches, scaled a 6 ft. iron fence topped with barbed wire. About 40 men, unable to escape the blazing wharfs jumped from the collier to a lighter. As flames swept the Carrimal's upper works the lighter's mast caught fire. Two tugs took the vessel, mast ablaze, down harbor to a fireboat base.

Three fire boats from Goat Island aided land companies to fight the fire, which burned a section of the wharf about 200 feet long and 50 feet wide. Firemen, however, managed to beat back the fire before it could involve a store containing machinery worth $5,000,000. Fire wrecked the above-deck installations of the collier.

The operator of the wharf's 80-ton, 100 foot-high mobile crane was caught in his cabin by the spread of the flames but managed to operate the crane back along the wharf, where he barely escaped.—JOSEPH GUNNER.

* * *

President Empowers FCC to Halt Broadcasts

President Truman issued an executive order, designed to prevent American radio and television stations from becoming beacons for enemy bombers or guided missiles in the event of attack, on December 10 last.

The order, drawn after a year of consultation between government, municipal and industry communications experts, empowers the Federal Communications Commission to draft plans for curbing broadcasts which would serve as radio guides for an air attack.

The president's order, implementing legislation passed by Congress in October, applies to all radio stations and to "any device capable of emitting electromagnetic radiations between 10 kilocycles and 100,000 megacycles which is suitable for use as a navigational aid beyond five miles."

Under the order, the F.C.C. is empowered to draft regulations applicable to all privately owned broadcasting stations, but such orders shall not become effective until they have been approved by the Secretary of Defense and the Chairman of the National Security Resources Board.

The order further directs the heads of all governmnetal agencies having jurisdiction over broadcasting equipment to draft and carry out "such plans as may be necessary to minimize the use of electromagnetic radiation of these stations in the event of attack."

The F.C.C. is specifically forbidden by the order to exercise any control over the content of broadcasts or to take over and use any station. The agency is permitted to require a station to stop broadcasting or to reduce its power in emergency.

Although the order is understood to include control over all emergency service broadcasting facilities (including fire and police), it is reported that neither the Commission nor the Armed Forces have any intention of shutting down these essential short wave facilities in time of attack. It was fear of this possibility that caused the International Associations of Fire Chiefs, through its Committee on Communications, and the International Asssociation of Chiefs of Police, among other bodies, to vigorously oppose passage of Senate Bill 537—the original measure offered by the Armed Forces and supported by the F.C.D.A. some months ago.

* * *

From the World News Ticker

District of Columbia residents are to be provided with identification tags at a cost of 50 cents per set of two. A master registration card will be filled out for a post-attack registration file. . . . An underground gasoline tank exploded in the heart of Bristol, England, on November 24. Six persons reported missing, many injured. Blast destroyed a garage. . . . High winds of a typhoon fanned a fire in Kowloon, China, village into one of the worst conflagrations in Hong Kong's history. More than 3,000 huts were destroyed, an estimated 15,000 to 20,000 persons were made homeless. Two known dead and 14 injured. The fire started on November 21 in Tung Tau village. Firemen had to improvise a 2-mile-long relay (no hydrants!). . . . The Federal Civil Defense Administration on Nov. 25 called for standardized equipment and training for the nation's "16,000 fire departments." The agency said standardization was "vital" for the the coordination and exchange of help that would be needed between communities in event of devastating enemy air attacks. . . . The 800-ton freighter Ponce de Leon headed for Honolulu on November 29, with cotton afire in her hold. Captain said fire was under control. . . . Fire in the main business sec-

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Crackerjack Imperial
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Municipal . . . Major
Lightning . . . Surety
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Underwriters
*Treated against mildew and rot; water repellent.

FLEXIBLE . . . balanced weave and premium yarn assure greatest strength and flexibility.

SMOOTH WATERWAY . . . lowest possible friction loss.

DEPENDABLE . . . unsurpassed for ruggedness and long life.

LOWEST COST PER FOOT PER YEAR

AR-2

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FIRST.. in advanced engineering design and functional dependability...

FIRST.. in fire-stopping effectiveness with inexperienced operators...

Your BEST PROTECTION FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

MODEL 20-B

Ansul Chemical Company is the *only* fire extinguisher manufacturer maintaining extensive chemical research laboratories in addition to a large engineering staff for research and development to maintain and improve the quality of its products . . . *Plus* the most extensive, best-equipped proving grounds in the industry.

*Get the facts. See comparative effectiveness ratings for various types of approved fire extinguishers based on tests by nationally recognized approval agencies. Write for file No. **814.** You will receive complete information and other valuable data.

Ansul Dry Chemical Fire Extinguishers were FIRST with the GREATEST FIRE-KILLING RATINGS ever attained by hand and wheeled portable fire extinguishers*. No type or make of extinguisher has ever exceeded Ansul's effectiveness ratings for flammable liquid fires.

Ansul features include: 1) Patented nozzle which provides the most effective stream pattern for quick extinguishment of fires . . . in addition to forming a heat-shield for the operator. 2) Watertight and corrosion-resistant construction. 3) Easy, on-the-spot recharging after use without special tools . . . and many others.

Ansul *"PLUS-FIFTY"* Dry Chemical is non-corrosive, non-abrasive and non-toxic. It is safe to use on electrical fires of any voltage. And ANSUL extinguishers need only be inspected annually, NOT RECHARGED, adding ECONOMY to GREATER FIRE-STOPPING EFFECTIVENESS.

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3. Mobil-Directo was **easiest** and **quickest** to install. No costly wiring, no heavy duty wiring or critical materials needed.
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6. Mobil-Directo is low cost—will save your community many thousands of dollars because it has now been proved the most inexpensive siren on the market for area covered.
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For civil defense as well as for general community needs, Mobil-Directo is the best siren at the best price.

The Mobil-Directo siren is currently being produced for the United States Armed Forces.

Write us for complete information and copies of the actual reports submitted after the Jefferson City Civil Defense test mentioned above.

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HOWE Fire Truck Equipment Meeting Every Service Since 1872

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HOWE FIRE APPARATUS CO., 1402 W. 22nd St., Anderson, Indiana

tor of Georgetown, British Guiana, on November 31, destroyed two blocks of commercial buildings and wharves causing damage estimated at $20 million. . . . A fire on November 24, razed more than 150 buildings, killed nine persons and seriously injured others at the fishing town of Katsura, 50 miles southeast of Tokyo. . . . A midnight fire in a hospital at Kushiro, Japan, on December 1, brought death to 17, destroyed eight nearby houses. . . . A spectacular oil well fire near Point Barrow, Alaska, was put out December 8, after burning 48 hours. It destroyed a steel derrick. Fire was in one of Navy's exploratory wells in Point Barrow Naval Petroleum Reservation, 500 northwest of Fairbanks. . . . A pipeline explosion near the Mene Grandes el Tigre field in eastern Venezuela on December 5, killed nine oil workers and injured three others seriously. All were Venezuelans. Cause of the blast was undertermined.

Questions and Answers

Effect of Shorter Lines on Pump Pressure

To the Editor:

I have always understood that a 500-gallon pump would furnish two streams through 1⅛-inch tips. This means approximately 50 pounds pressure at the tips, which to me indicates that the lines would be about 400 feet long considering pump pressure at 120 pounds. However, if the lines were shorter, say 250-feet long, what would be the result? Wouldn't the pressure at the tips have to be reduced, or smaller tips used?

D. N.

Answer: Operating the pump at 108 pounds pressure, each 1⅛-inch tip will discharge approximately 250 gallons per minute at approximately 45 pounds nozzle pressure. The 500-gallon pumper would supply two such lines.

If the lines were shortened, it would be necessary to lower the engine pressure to keep the discharge at the same figure—250 gallons on each nozzle.

The nozzle pressures could, of course, be maintained at 45 pounds, but the engine pressure would be less for it would have to overcome less friction loss in the shorter lines.

Layout for Testing Pumper

To the Editor:

I have been studying hydraulics and there are a few problems I cannot quite figure out. I would appreciate your solving the following two problems for me.

1. Can a 700-gallon pump be made to deliver at least its full rated capacity at 120 pounds pump pressure through two 100-foot lines of 2½-inch hose siamesed into a 1¾-inch nozzle?

2. How many feet would a stream travel issuing from a nozzle 18 feet from the base of a building and enter-

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Modern fire fighting calls for *specialized* protective clothing that safeguards the fireman's life on every run . . . clothing that enables him to use his equipment to the fullest advantage.

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In our vast selection of rubber materials you will find a type of fabric suitable for your climate and needs. The softness and flexibility of the high-grade materials used are your assurance of long time service and comfort.

Due to government requirements for Midwestern Protective Clothing, it will assist in prompt delivery if you place your order early. For complete information, have your Midwestern dealer show you our full line. A letter to the factory will also bring you material samples for your inspection.

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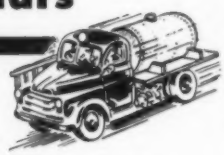
Manufacturers of the Famous **MACKINAW Coats**

Build your own fire truck for a few hundred dollars



The time has come when rural fire protection should leave the "Fancy Dan" class so that every small community can do a real down-to-earth job of extinguishing fires rapidly, simply and inexpensively.

The nickel plate, red paint, gadgets and polish are good if you can afford them. But all you need for sound, economical fire protection is an Oberdorfer All Bronze Pump hooked up to the transmission of a dependable truck that carries a tank of water loaded with a good wetting agent.

Effective fire control starts just as soon as this outfit can reach its destination and a man can grab the nozzle end of the booster hose and get to the fire. The resulting penetrating stream of over 125 lbs. pressure is the fastest and most important phase of fire fighting.

Do you have a garage, a truck and a mechanic with a little common sense? We have the pump you need. Write for details.

PERFORMANCE DATA—No. 26 PUMP SHOWN ABOVE

Pump Shaft R.P.M.	Pounds Pressure	Hose Length and Size	Dry Suction Lift in Feet	Vol. in Gal. Per Minute
1600	120	500'—1½"	15'	150

For complete specifications of this and other Oberdorfer All Bronze Booster Pumps, and name of your nearest distributor, write:

FIRE PUMP DIVISION OBERDORFER FOUNDRIES, INC., Syracuse, N.Y.

Listen to the Men Who Use it!

From Coast to Coast . . .
Progressive Fire and Police Chiefs . . .
To Protect Their Men and to
Save Life, Time and Property.

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10 TOOLS IN ONE—DOES EVERYTHING—EVERYWHERE

ONE MAN—alone—
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CERTIFICATE of MERIT Boston Fire Fighters Local 718, IAFF, Awarded to Chief Hugh A. Halligan, Fire Dept, City of N. Y.

Grand Rapids, Mich.: "Very much pleased and satisfied with tools." **Union City, N. J.:** "The best all around tool in the fire-service. I readily recommend them to any Fire Dept. or emergency requirements."

M. A. HALLIGAN, 1505 Metropolitan Ave., N. Y. 62, N. Y.

ing a building at an altitude of 18 feet.

J. M.

Answer: Yes, a 700-gallon pump can be made to deliver at least its full rated capacity at 120 pounds pump pressure when pumping through two 100-foot lines of 2½-inch hose siamesed into a 1¾-inch nozzle, provided the discharge gate is closed partly to throttle the discharge.

Here is the way the problem is solved:

The value of K for parallel lines of 2½-inch hose fitted with a 1¾-inch nozzle is .242.

Engine pressure is 120 pounds.

L, the number of 50-foot lengths of hose in the line, is 100 ÷ 50, or 2.

Then N. P. $= 120 \div (1.1 + .242 \times 2)$
$= 120 \div 1.584$
$= 75.76$ pounds.

The discharge from a 1¾-inch nozzle at 75.76 pounds is found as follows:

Discharge $= 29.7 \times D \times D \times \sqrt{P}$
$= 29.7 \times 1\frac{3}{4} \times 1\frac{3}{4} \times \sqrt{75.76}$
$= 29.7 \times 1.75 \times 1.75 \times 8.7$
$= 791$ gallons per minute

You will note that this discharge is above the rated discharge of the pumper, which is 700 gallons per minute. While a 700-gallon pumping engine might be able to deliver 791 gallons at 120 pounds, it cannot be called upon to deliver more than 700 gallons per minute at 120 pounds. To get the flow down to 700 gallons per minute, gradually close the discharge gates of the pumper feeding the two lines while the engine pressure is maintained at 120 pounds. This will bring the nozzle pressure down below the calculated pressure of 75.76 pounds, but it will also bring the flow down to the proper amount, namely 700 gallons per minute.

Answering your second question, the distance of penetration of the stream will depend upon several factors. In the first place, the height of the ceiling above the point at which the stream enters the building must be known.

The nozzle pressure must also be known, for the higher the nozzle pressure within reasonable limits, the straighter will the stream be, and thus more nearly will it approach a straight line. The lower the pressure, the more gradual the arc, or path, of the stream will be, and this factor has a very mateterial effect upon the distance of penetration of the stream.

Churn and Relief Valves

To the Editor:

For a long time we have had an argument going on in our fire company about our two fire trucks. One is a 500-gallon rotary pump (clover type) and the other is a 750-gallon piston pump.

Our problem concerns the relief valve and what it does. I would like to present a problem, which may not be practical, but is for the sake of trying to explain the problem.

Say our 500-gallon rotary was drafting from a pond and was pumping through 100 feet of 2½-inch hose with a 1½-inch tip. The pump was delivering 500 gallons a minute and the relief valve was set at 120. The nozzle was shut down and the relief

ON THE JOB IN 1464 CITIES AND TOWNS

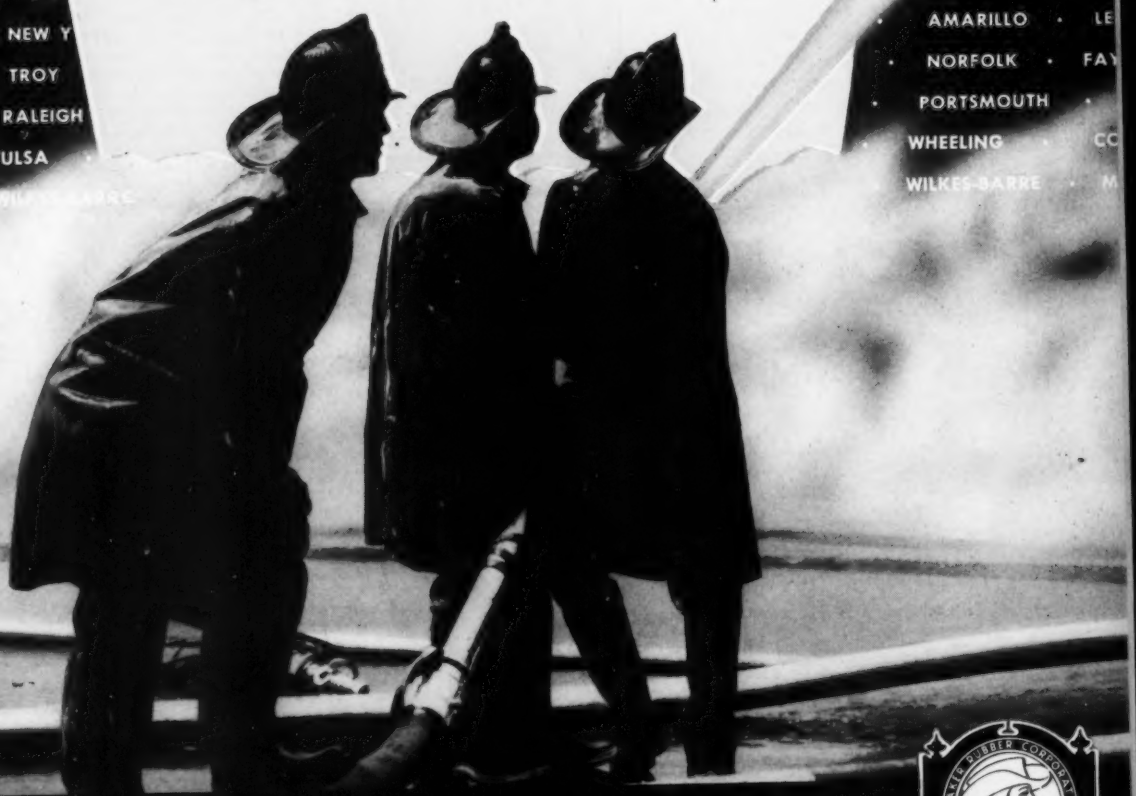
defying punishment . . . providing trouble-free fire protection

Quaker Fire Hose is the choice of municipal, industrial, and volunteer fire fighters all over the map. That's because:

- **IT'S STRONGER . . . having extra tough jackets and specially compounded non-acid forming tubes that resist heat, abrasion, and abuse.**
- **IT'S EASIER FOLDING . . . due to advanced design and construction resulting in flatter-folding, more compact storage, greater flexibility, and ease of handling.**

Quaker's unique "easy-fold" construction allows up to one-third extra footage in trucks. Its lighter weight assures quick action when fast action is needed.

For greater security—greater economy—specify and insist on "QUAKER" Fire Hose. See your Quaker distributor, or write direct to us.



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DIVISION OF H. K. PORTER COMPANY, INC.

PHILADELPHIA 24, PENNA. BRANCHES IN PRINCIPAL CITIES

100 SIMULTANEOUS FIRES

No Water! Streets Blocked! Broken Sewers!

It can happen in your community through enemy bomb attack, sabotage, carelessness or natural disaster.

Plans for **Civil Defense** now top the list in most municipal programs.

In such an emergency one of the first needs is for **pumps.** Numerous fires - not enough equipment - truck pumpers can't get through - water pressure low or water mains broken - - - what to do?

Many wise officials are prepared for such an emergency. **The Dual Fire Fighter** is a reliable, light portable pump, weighing only 162 pounds -- easily carried by two men. It fills a vital need as a booster pump, or when the truck pumper is unavailable or when it is impracticable for the pumper to reach the fire, the Dual Fire Fighter will fight fires direct.

Write and find out what others think of these invaluable and economical pumps.

Ask for Bulletin No. 9-FD-11

The **DUAL** *Fire Fighter*

The "Dual Fire Fighter" requires very little space on the pumper. Pump is integral with 4 cycle, single cylinder, air cooled engine of 8¼ H.P. Every pump is factory tested before shipping.

THE GORMAN-RUPP COMPANY
MANSFIELD, OHIO

BAR-WAY HOSE COUPLINGS

FOR BOOSTER and HIGH PRESSURE FOG LINES

REMOUNTABLE — without the purchase of additional parts; use over and over again

FULL FLOW — no suppression of flow in coupling

HIGH PRESSURE — tested to 3000 lb., 500 lb. pull

INTERNAL EXPANSION — no shrinkage of hose at coupling

STREAMLINED — free from objectionable projections

ACCURATELY MACHINED — always the same . . . interchangeable

For maximum efficiency, economy and protection in ¾" and 1" sizes, specify Bar-Way couplings attached to hose of proper size.

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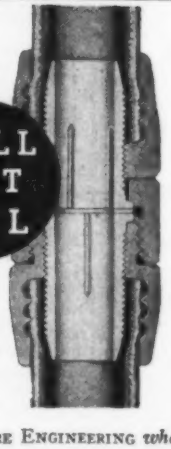

BAR-WAY MFG. CO.
STAMFORD, CONN.
West Coast Representative
W. D. Rigdon
383 Brannan St., San Francisco 7

valve went into operation. Say the motor R.P.M. and the pump pressure stayed the same with the nozzle closed. What happens to the 500 gallons we were pushing out the hose before the nozzle was closed? Does the water still churn in the pump at 500 gallons a minute? Or does just water enough to relieve the pressure churn around the pump?

Would the same thing hold true for the piston pump delivering 750 gallons per minute?

Are the relief valves that are on the trucks, regardless of pump capacity, big enough to churn their given capacity through the relief valve in case the line should ever be closed?

I would also like to know what part the churn valve plays on both pumps and when they should be used. Which pump, if both were in perfect operating shape, would be more positive?

V. E. D.

Answer: In a positive displacement pump when the flow of water is stopped, such as by shutting down the hose line, the pump must be theoretically stopped since the discharge is directly proportional to pump speed. In order to eliminate the necessity of stopping the pump and to give greater flexibility in the operation of the pump, a churn valve is provided on the displacement type pumps. A churn valve is simply a manually controlled by-pass between the suction and discharge sides of the pump. When this valve is open, the water from the discharge side passes into the suction side and provides a constant circulation within the pump, even with all the discharge outlets closed. The churn valve is manually operated.

But the pump operator seldom knows in advance when a hose line is to be shut off. If a single line is operating from a displacement pump, a sudden closing of a nozzle may result in damage to the pump. To prevent this, the automatic relief valve is employed. This device performs the same function that the churn valve performs except that it is automatic in operation.

The by-pass of either unit is sufficient to take the entire discharge capacity of the pump.

It should be pointed out, however, that operation of pumps at high speed with the entire discharge going through the churn valve back to the suction side of the pump may cause a serious heating of the water locked in the closed circuit.

As noted above, the churn valve is employed for deliberately by-passing the water, while the automatic unit operates automatically whether or not the operator is on hand.

As to the slippage in pumps, the rotary and piston pumps, if in perfect operating condition, would perform equally as far as the amount of slippage is concerned. Each would be fully "positive."

For the details on the design of churn valves and automatic relief valves, we suggest that you refer to "Fire Department Pumps, Pumping Equipment and Pumping," a book published by the International Association of Fire Chiefs, 22 East 38th Street, New York 16, N. Y. This book retails at $1.50 a copy.

Obituaries

E. A. Ward, A. D. T. President

Edmond A. Ward, president of the American District Telegraph Company, a branch of Western Union, which provides fire and burglary protection through electrical systems, died Sunday, Dec. 16, of a heart attack in his home at 710 Park Avenue. His age was 55.

E. A. Ward

Born in Chicago, a son of John James and Sarah Claire Ward, he attended public schools in Chicago, and in 1910 entered the employ of the Chicago, Rock Island & Pacific Railway. In 1912 he joined Western Union, serving as traveling auditor and chief traveling auditor, and in the bureau of systems and methods.

Mr. Ward became secretary and auditor for the American District Telegraph Company in 1921, was named vice president in 1929, and, after serving as executive vice president, was elected president and a director in 1946.

A leading figure in the electrical protection industry, he was president of the Central Station Fire Protection Association and a member of the Newcomen Society of England, National Fire Protection Association, International Association of Fire Chiefs, New York Electrical Society, Association of American Railroads, National Electrical Manufacturers Association, and Chamber of Commerce of the State of New York.

Surviving are his widow, the former Charlotte Bennett; two sons, Edmond B. of Dumont, N. J., and Robert J. of West Hempstead, L. I., and a brother, John J. of Atlanta, Ga., and a sister, Mary F. Ward of Chicago.

Charlie Blomquist

Charles Blomquist, Arlington, Mass., Service Engineer for the Seagrave Corporation, died December 18th, 1951, at the age of 64.

Charlie, who was widely known throughout the fire service of the East, had been connected with the Seagrave Corporation in a service engineering capacity since October 1, 1920.

Frank Agnew

Frank Agnew of the Law Department of the National Board of Fire Underwriters, San Francisco, died December 13th last in New York City from injuries received in a traffic accident December 7, 1951. He was 73 years old.

Mr. Agnew was in New York to at-

MORE TESTIMONY ON

INDIAN

Fire Pumps

FROM MEN WHO KNOW!

We believe the comment of these men, all of whom are prominent in the fire prevention field, tells more about INDIAN FIRE PUMPS than anything we might say.

Have you ordered INDIAN FIRE PUMPS for Civil Defense? Be Prepared!

"AMAZED"

"Traveling throughout New York State and visiting many firehouses, I have been amazed at the number of INDIAN FIRE PUMPS in service. Fire Chiefs do not normally add useless equipment to their rigs."

Chief Henry F. Drake, Sec.-Treas. New York State Association of Fire Chiefs

"EMINENTLY SATISFACTORY"

"For years our department has used INDIAN FIRE PUMPS and they have proved eminently satisfactory."

Lester H. Clark, Fire Chief Cloquet, Minn. Fire Dept. — President Minnesota Fire Chiefs Association

"INDISPENSABLE"

"We have several INDIAN FIRE PUMPS in our department. They are indispensable for prairie and light brush fires for which we use them."

Rex. F. Honnold, President Nebraska State Volunteer Firemens' Association Shelton, Neb.

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SINGLE AND DOUBLE HYDRANT GATE VALVES

are the best your money can buy!

PLATE 116

We sincerely believe that the money spent by a fire department should buy only the very best equipment possible. Since 1892 we have striven to produce only the best precision tooled and strongly built brass Fire Fighting Equipment that can be manufactured.

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The number of repeat orders from Fire Departments all over the country have proven the value of this policy maintained by Powhatan Products.

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The experience we have gained over these many years, plus the engineering skill we are able to marshal, makes Powhatan eminently able to take care of any requirements you may have.

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CRASH TRUCK

UNDERWRITERS APPR. N.Y.S.F.I. RATING "O"

BLITZBUGGY

FIRE FIGHTER

Pumps 150 G.P.M. at low pressure—draft or hydrant

At a price you can afford

CARRIES 200 GALLONS WATER — PRODUCES 600 POUND HI-PRESSURE FOG — IDEAL FOR OIL AND GAS FIRES — AIRPORTS — INDUSTRIAL AND VILLAGES.

HI-PRESSURE FOG EQUIPMENT CO. OLD FORGE N. Y.

tend the National Association of Insurance Commissioners convention. He joined the Board 20 years ago in San Francisco where he had been a field man with the Firemen's Fund Group. He is survived by a widow, three children and seven grandchildren.

Chief H. A. Redding

Howard A. Redding, 49, Chief of the North Chicago Fire Department, died December 25th, following a heart attack on December 13th. His death ended a career of more than 25 years in the fire service.

Chief Redding served as fire chief at Fort Sheridan from 1941 to 1946. He was a state vice president of the International Association of Fire Chiefs. He retired December 15th as president of the Illinois Association of Fire Chiefs.

He leaves a widow, a daughter, a son and a sister.

Persons in the News

Indianapolis Chief Retires

Fire Chief Roscoe McKinney has retired as head of the Indianapolis, Ind., Fire Department, after 38 years with the organization.

Chief McKinney, who will reach the mandatory retirement age of 70 years next April, will be succeeded by Joseph Hancock, appointed to the post by Mayor-elect Alex M. Clark.

Under the administration of Chief McKinney, the Indianapolis Fire Department established an enviable record for progress.

Chief Higby of Detroit Retires

Fire Chief Ninnian C. Higby, who has headed the Detroit Fire Department since 1946, retired on Jan. 9, 1952, after an active service of 39 years with the department. He is 58 years old.

The Detroit Fire Commissioners accepted the Chief's request for retirement with regret and appointed as his successor, Assistant Chief Edward J. Blohm.

Chief Higby became a fireman in 1913, and was promoted to lieutenant in 1924; captain in 1928; battalion chief in 1939 and assistant chief in 1944.

Chief Blohm joined the department as a cadet in May, 1913, and was promoted to lieutenant in September, 1924. He rose to captain in 1930, battalion chief in 1941, and was made a temporary assistant chief in April, 1945.

He was confirmed in this position in August, 1946, and became deputy chief in September, 1949.

Fisher New Johnstown Chief

Former Assistant Chief Albert Fisher has been named Fire Chief of the Johnstown, Pa., Fire Department. He succeeds John A. Moran, veteran chief who retired November 1.

The new chief is a veteran of 32 years' service with the fire department. He entered the organization in 1916, serving first as a driver. Following duty in the Navy in World War I, he returned to the department in 1920. He was appointed a captain 1932.

In recommending Fisher for appointment as chief, Johnstown Mayor Walter

E. Rose said: "I feel the men in the department regard him as a firemen's fireman."

Among the Buffs

By Paul C. Ditzel

My belief that Chicago is THE fire buff's Utopia is being borne out by the number of extra alarms we have already had this winter. The repeated heavy snowfalls and below zero temperatures have made this one of the busiest Winters in Chicago Fire Department history.

The city has had a flock of 5-11 alarms and an uncomfortably large number of second alarms on up. Fire Commissioner Corrigan's orders as of this date are: two engines instead of one to all still alarms and all "days off" cancelled. In Chicago this is indeed a rarity.

And it should happen at a time like this:

I got married December 12 and have only struggled through the deep snows to an unsensational 4-11 alarm in a bowling alley. So if you correspondents have been wondering why no word from your Chicago Firemen's friend, please excuse the lack of mail. Please also note that my address and telephone number have been changed.

On a recent night of blizzard and cold, the local fire alarm operators struck two 5-11 alarms, a 4-11 alarm, and four other multiples. One of the five-baggers and the four alarmer were going at about the same time within several blocks of each other on Chicago's Bronzetown on the south side.

Ace Cameraman and Fire Buff Steve Lasker happened onto the start of the 5-11 fire in Bronzetown as he was returning home early in the morning from the 4-11 alarm. Steve pulled the box for the first alarm companies and took a number of pictures of persons ready to jump from hotel windows. Steve sold the pictures but spent most of it getting repaired: he suffered first degree frostbite on his feet. His pictures, however, were first rate.

In other local action of note, an aerial ladder broke off five feet from its base while four firemen were advancing a hoseline up it during a recent 2-11 on the southside. The firemen were hurled to the ground but none of them were hurt too seriously. Six other firemen were hurt at the fire, four of them of Squad 8 when a section of the roof fell in on them.

Thanks to all the firebuffs who sent Christmas cards to this columnist. Tom Jewett's red engraved card of an old steamer, wishing "a Hot 3 Alarm Merry Christmas" was a prize winner. The cards of that ultra-enthusiastic 476 Club down Philadelphia way were also collector's items. Thanks also to the following buffs whose cards have been received to date: Don Loeffler (ex of Korea but apparently now home from the wars), Jack Robrecht, Box 476 Club's endurance man: "I don't care how far it is! If my legs last that long I'll make it to the fire and still have enough energy left to do as much fire duty as the rest of you guys!" Also a card from Smokey Bass from Bell, California. And of course Baltimore's exponent of everything firewise, Smokestack Hardy. Incidentally, Friend Smokestack,

NO INSTRUCTIONS NECESSARY WITH THIS EXTINGUISHER!

IT'S A RANDOLPH!

From bracket to blaze in split seconds! No valves to turn, no nozzles to adjust; just point and press your thumb and Randolph's cloud of snowy CO_2 kills fire completely!

Non-damaging Randolph CO_2 evaporates without a trace, is non-toxic, won't conduct electricity, deteriorate or freeze. And *all* Randolph Models are Underwriters' Approved.

A complete line of extinguishers and automatic systems

Learn how Randolph gives your plant panic-proof, positive fire protection! Write Randolph Laboratories, Inc., 19 E. Kinzie St., Chicago 11, Illinois.

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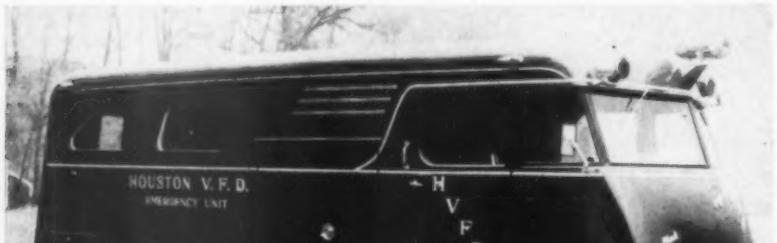

Guiding today's trend in RESCUE CARS

Rescue Cars designed and built by Gerstenslager are pointing the way to new efficiencies in meeting the responsibilities now facing Public Safety departments throughout the U. S. A.

All Gerstenslager units are designed and built to individual specifications. Public safety departments find our knowledge of rescue car requirements helpful in obtaining maximum usefulness for a given wheelbase. They find that our skill and experience in producing custom-built bodies helps to meet budget requirements.

One of our field sales engineers will welcome an opportunity to give you more detailed information.

The GERSTENSLAGER Co.
WOOSTER, OHIO *Estabiished 1860*

SPECIFY
dependable TRUMPET quality. This insignia on any fire fighting equipment is an assurance of precision construction and thorough engineering for a lifetime of service.
HOSE BRASS GOODS
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Chicago now has another all-Negro engine company. It is Engine 12, at 1641, W. Lake St., in the area of Chicago's large west side Negro belt.

From England comes a Christmas greeting from Geoff Pratt and his family. Geoff, editor of our contemporary *Fire Protection and Accident Prevention Review,* has chosen for his Christmas card an engraving showing the Amsterdam Fire Brigade at work in 1690.

You collectors of fire pictures may be able to do some trading with Willard R. Smith of R.D. 2, Box 533 A, Neptune, N. J., who specializes in water towers. He also builds models of them. "Any pictures of towers are of more concern to me than 2 inch steaks," Will writes. Right now he's interested in San Francisco, Memphis, Lowell and Worcester, Mass., New Orleans, Chicago and other cities fire tower-wise. He says he's got some good ones of old timers to swap and prefers eight by ten side views. He's also after turret wagons and high pressure rigs and any horse drawn or tractor old timers.

Buff Bill Conradi, Sr., secretary of the Bell and Siren Club, Inc., says his outfit answers all multiple alarms in Newark and East Orange, N. J. You can write Bill at 86 Wakeman Ave., Newark 4, N. J. Bill sent along a long article from the Newark Sunday News on the club's activities. The club also rated a seven column headline! I was interested to read that the club carries group insurance which provides for payments to any member injured while acting as a member of the club.

Bell and Siren, which is limited to 50 members, was incorporated last March. At a recent extra alarmer in Newark, it distributed more than 15 gallons of coffee and 285 quarts of milk, orange juice and lemonade to firemen. The club, which hopes to get its own canteen van soon, has its cups carried to the fire in Newark's searchlight wagon which responds on all multiples. In addition to refreshments, the club assists in stretching hoselines and making themselves generally useful. Fire Chief Burnett has issued them badges which permit them inside fire lines.

Carl Fridley, of 1833 East 40th St., Cleveland, Ohio, fire enthusiast, says he collects fire department rosters, then obtains maps of the cities for which he has rosters and marks location of the apparatus on the map. The only other fan I've heard of who does this is Deacon John Corcoran, 30 Northrup Place, Buffalo.

New officers of the Third Alarm Association Inc., 468 West 143rd St., New York 31, are President E. O'Neil, Vice-President R. McIntyre, Corresponding Secretary V. Moses, Recording Secretary Al Baer, Treasurer J. Webster, Financial Secretary R. Oberfelder, and Sergeant-at-Arms A. Frankl. The club puts out a newspaper which contains some good reading matter. Best story was the one about the second alarm where the first alarm assignment was German and the second alarm assignment was made up of all-Irish companies. Between the Chermans and the Lads from the Old Sod, they finally got the fire out.

Fire Buff Bill Siewert of 1706 W. Sixth St., Racine, Wisc., writes that he too got married. Bill and I were fellow fire buffs when we attended Northwestern University together. Bill says the

wedding present he liked best was a fire helmet!

I got a fire alarm box key as a wedding gift, Bill.

Fire Photographer W. A. McDonnell, of 1531 Switzer Ave., St. Louis, Mo., made up his own Christmas cards of an old hose reel. A right smart Christmas card and one which will go into my historical file, sir. He says his best fire photography work comes from use of Eastman Super XX and, for color work, he likes Ansco. Mac says he's recruiting members for the Associate branch of the International Association of Fire Chiefs. It's a good organization to belong to, fellow fans, and the yearly dues are well worth it. Write Mac for further information.

The Second Alarmer's Association of Philadelphia says some fans have obtained an incorrect address for the club. Joseph C. Farley the secretary of the club, says the Second Alarmers' only address is 51st and Sansom St., Philadelphia 39, Pa. Brother Farley also extended an invitation to all fans to visit their station whenever in Philadelphia.

Striking it out again this month, I especially want to call your attention to a change of quarters. I'm now rolling out of The Aldine Apartment Hotel, Apartment 704, 641 Aldine Ave., Chicago 13, Ill. My home telephone number is Eastgate 7-5527. My office address: The Associated Press, 160 N. LaSalle St., Chicago, Ill., Phone State 2-7700 remains the same.

News of the Manufacturers

E. F. Gaston, President of A. D. T.

Following a special meeting of the Board of Directors, Dec. 20, Walter P. Marshall, chairman, announced the election of Edward F. Gaston as president and a director of American District Telegraph Company and its controlled companies. He succeeds the late Edmond A. Ward who died on December 16. The new president will announce other organizational changes shortly.

E. F. Gaston

Mr. Gaston, who has been vice president of the company since 1947, started with ADT in 1907, timing watchmen's signals at New York. He has had wide experience in virtually every phase of the electric protection company's operations, having worked his way up through the ranks.

Mr. Gaston became a member of the executive offices plant engineering staff in 1921. In 1935 he was elected assistant secretary of the parent and subsidiary

You probably have never given much thought to this question and yet it is so important — take a few minutes now and see *why*.

At BLACKINTON, huge badge stamping presses exert a force upon impact of approximately 500 tons — seems almost unbelievable doesn't it. Now you say, why all this pressure. The answer . . . *to make a better badge for you.*

Every BLACKINTON badge is subjected to these tremendous pressures to insure clean-cut, sharp, exacting details. Look at any BLACKINTON BADGE and see what we mean — notice the fine detail — here you see more than just a badge, here you see the results of 100 years badge manufacturing experience.

Be sure you are getting the finest — ask your badge supplier to show you BLACKINTON BADGES the next time he calls.

BLACKINTON

V. H. BLACKINTON & CO., INC., ATTLEBORO FALLS, MASS

In 1952, Please Don't Ask To Buy Our Resuscitator . . .

Until you have investigated them all . . .

A strange request from a firm whose major aim is the manufacturing and selling of resuscitators.

Yet we are so strongly convinced that our machine stands out in any comparison, that we have for some time now been urging men like yourself to make a strict comparison between ours and every other resuscitator made.

For the responsibility of purchasing a resuscitator is great, and your whole community looks to you to buy only the most modern life-saving equipment.

We do not like to deal in superlatives—we base our superiority on but one thing: "Applying 20 years of experience in the field, our principals have developed a resuscitator that does more for the patient."

With it, you can control operating pressures and oxygen-air concentrations. You can do a better job of protecting your men and your community.

If you would like to see the Stephenson Resuscitator in action, allow us to arrange a demonstration for you. Or permit us to forward you detailed literature. . . . Contact us today.

STEPHENSON CORPORATION
RED BANK NEW JERSEY

Represented in Canada by SAFETY SUPPLY COMPANY of Toronto

Central 500 Gallon Fire Equipment Recently Delivered to St. Jacob, Illinois.

CENTRAL FIRE TRUCK CORP.
4437 Manchester Avenue, St. Louis 10, Missouri

companies. In 1941 he was made general superintendent of plant and held that position until he became vice president.

Mr. Gaston was born in New York City and is a resident of Tenafly, N. J. He is married and has three children. Mr. Gaston's two brothers, Milton and Alex, are former major league baseball stars, Milton having been a pitcher for the New York Yankees and Boston Red Sox and Alex a catcher for the New York Giants.

Fire Detection Alarm System Added to Kidde Line

A fire detection-alarm system for industrial or public buildings that gives quick, accurate warnings has been added to the fire safety equipment line of Walter Kidde & Company, Inc., Belleville, N. J. Approved by Underwriters' Laboratories and meeting all requirements of state laws for alarm systems in public buildings, the system can bring substantial reductions in insurance premiums from underwriting companies and rating bureaus.

This is the main control board of a typical fire detection-alarm system. Here, a fire signal from any area of the building is received and electrically analyzed. The board then causes alarms to sound, the area of the building containing fire is registered on strategically located visual indicators, and an alert is flashed to the municipal fire department. The small bell and the box above it comprise the battery-powered auxiliary electrical supply. Should public power fail, this secondary source automatically cuts in and the switch is reported by the bell. The batteries will furnish 60 hours of power.

The apparatus works on the temperature-rate-of-rise principle. Any undue temperature rise in a protected space causes an expansion of air in copper tubing mounted on the ceiling of the room. The two ends of the tube terminate at a detector. This expanded air moving in opposite directions through the tubing enters the detector and acts on two opposing diaphragms. The pressure forces them together and closes an electrical circuit which sounds an alarm.

Incorporated in the detector's design are features which eliminate the possibility of false alarms from normal temperature changes and even sudden, short surges of heat. Such air pressure increases are compensated for by two hollow, closed cylinders which cushion

any sudden or momentary expansion of air in the circuit. These cylinders pass the air up through breathers which release it to the outside atmosphere at a predetermined rate.

A slow gradual rise, or a sudden but momentary rise in temperature resulting in an expansion of air in the tubing will not actuate the detector since any moderate excess air reaching the detector can be absorbed by the compensator cylinders and gradually discharged. However, an abnormal continued rise in temperature, such as fire produces, causes the air to expand in the circuit faster than the breathers can discharge it. As a result, the pressure is passed on to the diaphragms which are forced together, actuating the alarm.

In addition to positive protection, the system is self-supervising. Outside power failures do not affect the operation of the detecting-alarm system. A self-charging wet battery electrical supply automatically cuts in, if outside power fails, and a warning signal sounds. The batteries deliver up to 60 hours of emergency power for the system.

Stop-Fire Features New "Redi-Grip" One Hand Operation

One-hand operation is one of the chief characteristics of the new Redi-Grip pressurized portable fire extinguisher now being added to its line by Stop-Fire, Inc., Brooklyn 1, N. Y. This model has been inspected and approved by Underwriters Laboratories, Inc. The Redi-Grip, adapted from an original design now being used by the U. S. Air Force, is available in 1, 2½ and 4 quart sizes and features a combination of charges—CBM (chlorobromomethane) or carbon tetrachloride, individually or in combination; the expellent may be either air or carbon dioxide.

One-hand operation features Stop-Fire's new Redi-Grip fire extinguisher.

This extinguisher may be released from its bracket and operated with one hand, while a patented safety-lock prevents accidental discharge. The unit has been designed for a wide range of industrial and institutional fire hazards and includes among its features; a removable head readily disassembled for inspection, cleaning or adjustment; non-clogging nozzle, Teflon gaskets; silver soldered

Designed to Meet the Flammable Liquid Hazards of Your Plant

Increased use of gasoline, alcohols, acetones, or other flammable liquids creates serious hazards you may have overlooked in your plant. Check your present protection facilities *now* so you can meet sudden emergencies with fast, positive, fire-killing foam.

National Foam engineers can survey your plant, study risks involved, and then determine the type of *foam protection* best suited to your plant's requirements . . . mechanical or chemical foams . . . the most complete choice of devices available . . . Foam Chambers for large tanks, Overhead Spray Deflectors, Nozzles, Dip Tank or Drainboard Systems, or even small extinguishers and other devices . . . whichever is best suited to your particular needs. Large plant, or small, National Foam specialists are ready to *engineer* foam protection to meet the hazards of your plant.

Let National Foam engineers and chemists show you how to get the best *foam* fire protection today! Consult your nearest National Foam Distributor, or write us direct about your problem.

NATIONAL
FOAM SYSTEM, INC.
Headquarters for Foam Fire Protection
WEST CHESTER, PENNA.

For *Volume* and *Pressure*

Specify HALE

HALE FIRE PUMPS are built in all STANDARD CAPACITIES

VOLUME *and* PRESSURE are both vital in controlling or stopping disastrous fires . . . the kind you have to fight all too often in mid-winter.

Firefighters who have used Hale FIRE Pumps *know* they can depend on a HALE for the right volume and the right pressure to fit a wide range of tough fire-fighting conditions.

In other words, they have learned through first-hand experience to appreciate a Hale's flexible range of performance and high efficiency.

Make sure of dependable *Volume* and *Pressure* in your next piece of apparatus by insisting on a Hale Fire Pump.

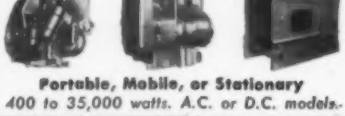
Write today for up-to-date bulletins on HALE FIRE PUMPS; they are built in all standard capacities.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.

ONAN
Emergency Electric Plants for *Civil Defense*

No matter what happens to central station power during a bombing attack, electricity for essential defense needs is always available with Onan Electric Plants. Onan units, mounted on truck or trailer, or carried in the trunk of a car, can be rushed to any point where power and light are needed. Sturdy and dependable, Onan Electric Plants are an important link in a city's defense against disasters of any kind.

Power & Light for Every Need



Portable, Mobile, or Stationary
400 to 35,000 watts. A.C. or D.C. models.

Write for folder

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5690 UNIVERSITY AVE., MINNEAPOLIS, MINN

joints; flexible siphon tube for maximum discharge at any angle and a drawn brass shell. Range of Redi-Grip exceeds 30 feet; discharge time of the 1 quart size is about 27 seconds at 70 deg. F.

Complete engineering details are contained in a bulletin now available from Stop-Fire, Inc., 125 Ashland Place, Brooklyn 1, N. Y., in addition to a bulletin covering the complete Stop-Fire line of portable extinguishers.

Corrosion-Resistant Extinguisher

The General Detroit Corp. (Detroit) and the General Pacific Corporation (Los Angeles) announced a one quart fire extinguisher "that will remain free from corrosion." This is accomplished by use of a "corrosion arrestor" featured in General Quick Air Fire Guards. The patented corrosion arrestor is a definite part of the pump which purifies the liquid and eliminates corrosion. It is approved by the Underwriters' Laboratories. It also meets requirements of Board of Railway Commissioners and Inter-State Commerce Commission for use on motor trucks, trains and buses.

G. E. Introduces Remote CD Siren Control

A test of new General Electric civil defense radio equipment which can sound many air raid sirens simultaneously, conducted recently in Knoxville, Tenn., was termed "highly successful" by Neal F. Harmon, CD Coordinator for G. E. at Electronics Park, Syracuse, N. Y.

The test was run at Tennessee Highway Patrol Headquarters in Knoxville. The new G-E equipment generates a special tone which was transmitted by radio equipment regularly operated by the Patrol. The Highway Patrol dispatcher sounded the red alert and the "all clear" from his normal position. Special receivers at each siren, upon receipt of the tone, activate the sirens, Harmon said.

He pointed out that there is no way for anyone to tamper with the sirens and set them off, nor can anyone jam the radio frequency and prevent the radio operator from having complete control of all sirens; it is reported the tone generating equipment may be incorporated into any recently installed FM radio communications system, or may be used with specially designed G-E civil defense receivers, called "Civil Defenders."

Kelly Gas Safety Valve

John F. Kelly, Lieutenant in the Cleveland, Ohio Fire Department, has developed a gas safety cut-off valve, designed to prevent the kind of trouble that eventuated in Brighton, N. Y., last October and that has handicapped fire fighters in fighting cellar fires for years.

The valve reportedly operates on the fusible link principle and is designed primarily for use in homes and apartment buildings, although it has a much broader application.

The Kelly-Byrne Positive Safety Gas Cut-Off Valve, as it is known, is an automatic closing valve with ground metal to metal seat, and proper openings for gas to pass through freely. It is held in an open position by means of a plastic link until excessive heat comes in contact with the link, causing it to

spread, break or become elastic within one minute. When this happens, it permits the stem, which is under spring pressure, to return to its closed position, cutting off the flow of gas within the building. Replacement links return the valve to operating condition.

The device is approved and listed by the Underwriters Laboratories.

Detailed information can be secured by writing Kelly Safety Device Co., 2196 West 65th Street, Cleveland 2, Ohio.

Withers of Alfco Retires, Lankford Appointed

Walter W. Withers, who has directed sales and management of the Washington, D. C., office of American-LaFrance-Foamite Corporation for 38 years, retired on October 31, 1951, for reasons of health.

Mr. Withers joined the American LaFrance Fire Engine Company sales force in 1913, being assigned to the New York office. In 1914 he established a district sales office in Baltimore, Md. In 1916 the district office was moved to Washington, D. C., where he continued as manager up to the time of his retirement.

At his retirement, Mr. Withers paid tribute to the fire service and said if he had his life to live over again he would pursue the same course followed in his 38 years in the business. He is succeeded by T. Lee Lankford, an associate of many years.

Seagrave Appoints Van Gorp to Chicago Office

The Seagrave Corporation announces the appointment of Norman F. (Spud) Van Gorp as a Sales Representative assigned to their Chicago branch office under the direction of Louis A. Lehr.

Mr. Van Gorp is well-known in the northern Great Lakes states, as he formerly represented one of the prominent manufacturers of fire hose in that territory. Louis A. Lehr, Jr., who has been associated with his father in the Chicago office, has recently been commissioned as an officer in the United States Army.

Mine Safety Appliances Issues New Booklet on Civil Defense Helps

What the well-equipped civil defender will wear and use is shown in a new booklet, *"Civil Defense Protective Equipment,"* just published by Mine Safety Appliances Company of Pittsburgh, Pa.

The 28-page booklet was conceived in the belief that the effectiveness of civil defense rests on the individual whose effectiveness in turn, depends on preparedness. It offers an outline of action for welfare, warden, fire, public warning, rescue, engineering, law enforcement, transportation, and health services.

Guidance for the booklet was obtained from records of countries subjected to aerial attack in World War II, the National Security Resources Board's manual, "United States Civil Defense," and MSA's long experiences in safety service.

A table of equipment for civil defense services including everything from stretchers and splints to MSA artificial respiration apparatus is included in the MSA publication. The table is broken down according to function and use by

DETECTS AUTOMATICALLY... SMOKE, SMOLDERING AND FIRE

at any location in your plant or warehouse!

Each fire hazard point gets highly efficient, round-the-clock fire watchman service simultaneously when a building is completely protected with a modern, fully approved C-O-TWO Automatic Smoke Detecting System.

The first whiff of smoke sets off an alarm, based on an exclusive operating principle ... no chance of smoke, smoldering or fire spreading ... instantly, the air conditioning shuts down, doors and dampers close, operating equipment stops and fire extinguishing systems actuate ... a truly automatic fire watchman.

Four types of smoke detectors and several different installation arrangements are available to fit your particular needs... single space systems, double space systems, multiple space systems, air conditioning duct systems ... all function by drawing continuous air samples through simple piping to a smoke detector.

Actual fire tests made by the Underwriters' Laboratories, Inc. show that fire detection with this type of smoke detecting equipment is much quicker than other methods ... because usually there is smoke or smoldering before flames break out.

Remember fire doesn't wait ... so, with current expensive delayed replacements, why not let an expert C-O-TWO Fire Protection Engineer help you now in planning economical, fully approved fire protection facilities. Write today for complete free information.

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C-O-TWO FIRE EQUIPMENT COMPANY

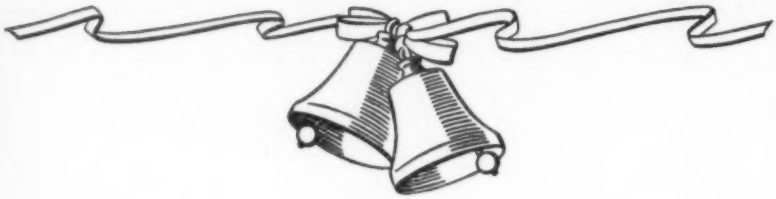
NEWARK 1 • NEW JERSEY

Sales and Service in the Principal Cities of United States and Canada

Affiliated with Pyrene Manufacturing Company

MANUFACTURERS OF APPROVED FIRE PROTECTION EQUIPMENT

Squeez-Grip Carbon Dioxide Type Fire Extinguishers • Dry Chemical Type Fire Extinguishers
Built-In High Pressure and Low Pressure Carbon Dioxide Type Fire Extinguishing Systems
Built-In Smoke and Heat Fire Detecting Systems



Happy New Year

to YOU!

and a better-than-ever

fire-safety record in 1952

BATTLE CREEK AMERICAN-MARSH PUMPS MICHIGAN

U.S.A.

Canadian Apparatus Plant:
American-Marsh Pumps (Canada) Ltd.
Stratford, Ontario, Canada

Canadian Sales Representative:
C. E. Hickey & Sons, Ltd.
Hamilton, Ontario

THE MYSTERY LINE

Plate J-200

Solid Fog—Solid Stream—
Shut Off. Plus complete
water control in each size.

Plate L-200

SIZES
1"—1½"—2½"
2½" Jumbo

Plate S-200

ELKHART BRASS MFG. CO., INC.
ELKHART INDIANA

the various services. Listings are shown for First Aid, Head Protection, Eye Protection, Protective Clothing, Respiratory Equipment, Emergency Lighting, Detection (of gas and radioactive particles) Equipment, and such miscellaneous items as cable splicers, pole climbers, warning signs, and safety belts.

What's Burning

THE following list includes fires of $10,000 loss and over in the United States and Canada for the month of December, 1951.

Month Ending December 31, 1951

Auburn, Ala.—Students' barracks at Alabama Polytechnic Institute destroyed.
Ashdown, Ark.—Dwelling of J. C. Curry destroyed.
Berkeley, Cal.—Larco Spring Mfg. Co. damaged.
Hillsborough, Cal.—Dwelling of Wesley R. Wetmore damaged.
Inglewood, Cal.—J. B. Finch Furniture Co. whse. destroyed.
Los Angeles, Cal.—Breakfast Club Coffee Co. roasting dept. bldg. destroyed.
Los Angeles, Cal.—Plt. of B. F. McDonald Co., mfrs. of safety appliances, destroyed.
Monterey, Cal.—Two whses. of Westgate Sun Harbor Co. destroyed.
Oakland, Cal.—Jewel Tea Co. whse. damaged.
San Leandro, Cal.—Intercoastal Paint Corp. damaged.
Denver, Colo.—Grain elevator, feed store, tavern, grocery and service station destroyed.
East Denver, Colo.—Dwellings of Edwin P. Glick and Sol L. Gertz destroyed; dwellings of S. Charles Tobias, Stanley C. Shubart and Henry Millstein in Hilltop residential district damaged.
Montrose, Colo.—Goodwin hardware store in downtown section damaged.
Millsboro, Dela.—Bldg. of Houston-White Lumber Co. destroyed.
Coral Gables, Fla.—Main bldg. of Ponce de Leon Junior High School damaged.
Augusta, Ga.—Officers' Club at Camp Gordon destroyed.
Chicago, Ill.—Four story Georgia Hotel damaged.
Chicago, Ill.—Three-story brick apt. house at 4400 Prairie avenue damaged.
Chicago, Ill.—Brick whse. of the Sidney Pearson Mfrs. Representatives destroyed.
Chicago, Ill.—Seven bldgs. occupied by Toffenetti Restaurant Co., station of Chicago, North Shore & Milwaukee Railroad Co.; Lyon & Healy musical instrument store; Hardin's Restaurant; Real Art Flower Co.; Peerless Service Garage; Orchestra Hall storage bldg. damaged.
Chicago, Ill.—Bldg. occupied by Stainless Steel Sales Corp., whse. and office and bldg. occupied by Sunbeam Corp. machine shop and whse. damaged.
Kingston Mines, Ill.—Loaded fuel oil truck and loading platform of Illinois Farm Supply Co. damaged.
Pana., Ill.—Farm home of Howard Andrews destroyed.
Lockport, Ill.—East wing of main dormitory at Lewis College damaged.
Moline, Ill.—Le Claire Hotel damaged.
Peru, Ind.—Broadway Pastry Shop, Northern Indiana Pubic Service Co. and Masonic Home damaged.
Rushville, Ind.—Rush County Farm Bureau Cooperative bldg. destroyed.
Terre Haute, Ind.—Saulters Methodist Church destroyed.
Windfall, Ind.—Bollinger Bros. farm implement bldg. destroyed. Overheated furnace.
Denison, Ia.—Three bldgs. occupied by Fair Store, office of Dr. M. O. Knapp, Denison beauty shop, Witt Hardware store, Farm Home Administration office, Gamble store and office of Dr. R. H. Heng destroyed, and Main Inn and Biersdorf Drug Store damaged.
Estherville, Ia.—Interior of P. G. Gray Produce Co. plt. damaged.
Russell, Kans.—Kessler dry cleaning plt. in business district damaged.
Lexington, Ky.—New Independent Co. No. 3 whse. destroyed.
Destrehan, La.—Most of 900-foot wharf at Pan-Am Southern Corp. refinery destroyed.
New Orleans, La.—Lyons Memorial Center auditorium and gymnasium destroyed.
Boston, Mass.—Brick mercantile, North End, housing Kennedy Co., dairy products; Joe Malesta Restaurant and Sam and Joe Clothing Co., damaged.

Haverhill, Mass.—Odd Fellows bldg., Harris Furniture Co. and Haverhill Rubber Co. damaged.
Hudson, Mass.—Eagle bldg., housing Wright jewelry store, Max Russin's tailor shop, Joe Green's auto store and Fraternal Order of Eagles, damaged.
Hudson, Mass.—Lurier Block, housing Auburchon hardware, White Star Laundry and Clover Farm Market, damaged.
North Attleboro, Mass.—First Baptist Church destroyed.
Salem, Mass.—West Hardware Supply Co. and adj. Ropes Drug Store and Hi-Tone Cleaning Shop damaged. Overheated furnace.
Woburn, Mass.—St. Charles Roman Catholic Church damaged.
Battle Creek, Mich.—Battle Creek Foundry Co. destroyed. Overheated furnace.
Flint, Mich.—Seven Gables, restaurant and tavern, Highway U. S. 10, destroyed.
Kalamazoo, Mich.—Lutes Trailer Co. plt. destroyed.
Trenton, Mich.—Socony-Vacuum Oil Co.'s big refinery destroyed. Oil tanks exploded.
Thief River Falls, Minn.—Three bldgs. housing Agsco grain elevator, Ray Shetler Hatchery and L. B. Schwartz Food Whse. destroyed.
Willmar, Minn.—R. E. Torgerson & Sons Clothing Co. and tailor shop and adj. Firestone store destroyed.
Kansas City, Mo.—Valley Growers Packing Co. plt. on Highway No. K-132 destroyed.
Monett, Mo.—St. Lawrence Catholic Church destroyed. Defective wiring.
Mound City, Mo.—Glenn bldg. destroyed.
St. Louis, Mo.—Wiegand Mfg. plt. destroyed.
Ashland, Neb.—Bldgs. occupied by Liene Hardware store, Nes Theatre and Charles Naber barber shop destroyed.
Lincoln, Neb.—Bldg. occupied by Terri Lee Doll Co. and Bible Publishing Co. destroyed. Adj. bldg. occupied by Finkelstein Auto Parts damaged.
Lincoln, Neb.—Theatre, nursery and office of Housing Authority destroyed.
Chatham, N. J.—Clubhouse of Chatham Fish and Game Assn. destroyed.
Morris Plains, N. J.—Main whse. of G. Washington Coffee plt. damaged.
Oceanport, N. J.—Restaurant and adj. gift shop damaged.
Rahway, N. J.—Columbia Grammar School damaged.
Westville, N. J.—Letty Lane Candies plt. damaged.
Dover, N. H.—Franklin clothing store, W. T. Grant Co. and studio of Portsmouth radio station WHEB destroyed.
Santa Fe, N. M.—Two shops at the New Mexico State Penitentiary destroyed.
Adams, N. Y.—State Theatre in bldg. owned by Cecil M. Patten destroyed.
Antwerp, N.Y.—Four business bldgs. and a home destroyed. Adj. bldgs. blistered. Oil heater explosion in restaurant.
Briarcliff Manor, N. Y.—Briarcliff High School, music dept. and two storage rooms, destroyed.
Buffalo, N. Y.—Storage shed and bldg. occupied by Metal Cladding, Inc., a plating concern, damaged.
Canton, N. Y.—Historic Fisher Hall, home of St. Lawrence Theological School, destroyed.
Granville, N. Y.—Three bldgs. occupied by Wilson's clothing store, Bert Goldberg's men's clothing store, Haskin's drug store, Harry's restaurant, Angelo Scott's restaurant and Lasher's drug store in Washington County destroyed.
Hudson, N. Y.—Dwelling occupied by Frank B. Harrington destroyed.
Hopewell Junction, N. Y.—Two barns on J. C. Penney farm destroyed.
Poughkeepsie, N. Y.—Lass Furniture Co. bldg. and Mid-Hudson Electric Co. bldg. destroyed.
Syracuse, N. Y.—The Auto Finisher's Supply Corp. and the adj. Blue Book Restaurant destroyed. The Syracuse General Tire Corp. damaged.
Woodridge, N. Y.—Unoccupied annex of Avon Lodge on Neversink River shore destroyed.
Gastonia, N. C.—Main office bldg. of Akers Motor Lines, Inc., destroyed.
High Point, N. C.—Dick Culler's Sporting Goods, Lucille's Beauty Shop destroyed, and nearby Tobias, a ladies ready-to-wear store, damaged.
Raleigh, N. C.—State Highway bldg. annex No. 1 on Capitol Hill destroyed.
Shelby, N. C.—Grandstand of Cleveland County Fair Assn. destroyed.
Williamston, N. C.—Lumber plt. of Wells Oates Co. destroyed.
Winston-Salem, N. C.—Southern Furniture Co. damaged.
Winston-Salem, N. C.—K. & W. Restaurant damaged.
Akron, Ohio—Quaker Oats Co. plt. damaged. Dust explosion.
Canton, Ohio—Business bldg. occupied by Hi-Way Cleaners, cigar store, restaurant and barber shop damaged.
Cleveland, Ohio—Lakeside Steel Improvement Co. plt. destroyed.
Cleveland, Ohio—Insul-Wool Insulation Corp. damaged. Burning paper.

✔ VICTIMS RESCUED
✔ FIRES OUT
✔ FIREMEN ALIVE and WELL

thanks to Chiefs who Specify

"Scott Air-Pak"

Fire Departments using *Scott Air-Pak* build enviable records for life and property conservation!

Fire Departments throughout the nation safely rely on Scott *Air-Pak* to locate and save persons trapped by smoke. Property loss, too, is reduced as fire fighters, safely protected from dense smoke and fumes, locate the fire and fight it at its source.

Scott *Air-Pak* is the *safe, proven* way to fight fires!

Scott *Air-Pak* Back-Pak (above) — ½ hour minimum duration at extreme exertion. Weight as worn 29½ lbs. B. of M. approval No. 1308.

OVER 2000 FIRE DEPARTMENTS NOW USING *Scott Air-Pak*

Over 2000 municipal and industrial fire departments use Scott *Air-Pak* — proof that it is safer, more economical and completely dependable. Special *Air-Pak* features include: cool, fresh AIR (not oxygen); demand-type regulator that can't be "outbreathed"; full-view mask permitting conversation.

FREE INFORMATION BOOKLET

Get the full story of Scott *Air-Pak* equipment—also arrangements for FREE DEMONSTRATION. Write for *Bulletin No. 510* and name of nearest distributor—today!

ESTABLISHED IN 1932
Scott
FOR SAFETY - FOR SERVICE

Ask to see the new Scott Demand Inhalator

SAFETY EQUIPMENT DIVISION
SCOTT AVIATION CORP.
215 ERIE STREET, LANCASTER, N. Y.
CANADA: SAFETY SUPPLY CO. BRANCHES IN ALL PRINCIPAL CITIES
EXPORT SOUTHERN OXYGEN CO., 157 Chambers St., New York 7, N.Y

WITH **FULTON** *Shuredry* **ON THE JOB**

Speed does it! Fulton Shuredy Salvage Covers are designed for fastest handling by your salvage crew. They are light, pliable and spread quickly and easily.

Pressure impregnated with the exclusive Fulton dry treatment, Shuredry Salvage Covers top every test for water penetration and seepage.

APPROVED by National Board of Fire Underwriters, and by Factory Mutual Laboratories.

You can depend on Shuredry to cut down fire losses! Specify FULTON SHUREDRY GREENBAK SALVAGE COVERS, from your fire equipment dealer.

Fulton **BAG & COTTON MILLS**

Atlanta • St. Louis • Dallas • Kansas City, Kansas • Minneapolis
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CAIRNS

The "CLIFTON"

(No. 900—REGULATION)

Regulation 8-comb style, with standard front; made of FLINT-FLEX, the rugged plastic that is light, tough, flexible and non-conducting; has the new FORMABLE HEAD BAND that can be moulded to your own particular head shape; complete protection at moderate cost. Also available in drop brim style.

Write for Catalog 341

Cairns & Bros., Inc. Allwood, Clifton, N. J.

HELMETS

Columbus, Ohio—Scioto Country Club, nearby Upper Arlington, destroyed. Sparks from overheated fireplace.
Crooksville, Ohio—Diamond Pottery Co. bldg. damaged.
Delaware, Ohio—Two-story brick dormitory at nearby Girls' Industrial School destroyed.
Dorset, Ohio—Pelich farm and home appliance store destroyed.
Findlay, Ohio—First Presbyterian Church destroyed.
Ottawa, Ohio—Bldg. housing a hardware and novelty store destroyed.
Springfield, Ohio—Woodworking plt. of Bundy Incubator Co. damaged.
Youngstown, Ohio—Grocery store at Cochran Supermarket damaged.
Central Point, Ore.—Southern Oregon Sugar Pine bldgs. destroyed.
Spray, Ore.—Mid-State Lumber Co. destroyed.
Springfield, Ore.—Brown Motor Co. destroyed. Torch sparks.
Blue Ball, Pa.—Jacob K. Mast potato whse., 15 miles northeast, destroyed. Gas spilled from oil heating stove.
Butler, Pa.—W. J. Offutt Co. Dept. Store destroyed.
Butler, Pa.—C. A. Snyder Co. garage destroyed and adj. apt. bldg. damaged.
Carbondale, Pa.—Reese Bros. Furniture Store and adj. Jones bldg. destroyed. Defective wiring.
Philadelphia, Pa.—St. Thomas Episcopal Church destroyed.
Ridley Township, Pa.—Lumber whse. and office bldg. destroyed.
West Chester, Pa.—Whse. of George B. Smith damaged.
Laurens, S. C.—Palmetto Worsted Mill Whse. damaged.
Deadwood, S. D.—Three bldgs. occupied by market, beauty shop, shoe store, children's shop, stationery store and apts. in downtown district damaged.
Geddes, S. D.—Cafe owned by Don Bowan destroyed.
McLaughlin, S. C.—Sioux Lumber & Implement Co. bldg. destroyed.
Clifton, Tenn.—Dwelling of Mrs. Betty Hughes destroyed.
Jackson, Tenn.—Lambuth Memorial Methodist Church destroyed. Defective hot water heater.
Nashville, Tenn.—Dept. store, grocery, furniture store and drug store, printing co., restaurant, apt. bldg. and three rental structures in Dupontonia business section damaged.
Nashville, Tenn.—Logan's supermarket destroyed.
Tullahoma, Tenn.—Temporary whse. of Rust Engineering Co., contractor on project for Arnold Engineering Development Center, destroyed.
Waverly, Tenn.—Burke & Price Motor Sales destroyed, and adj. theatre and storage whse. of Jack Saunders Motor Co. and Pace and Armstrong Motor Co. damaged.
Crowell, Tex.—Hardware, dry goods and jewelry stores destroyed.
Seymour, Tex.—Parkins-Timberlake and J. C. Penney dept. stores destroyed.
Shamrock, Tex.—Shamrock Ice Co. plt. destroyed.
South Dallas, Tex.—Bienville Furniture & Mfg. Co. bldg. damaged.
Stamford, Tex.—Stamford Cotton Oil Mill damaged.
Highgate, Vt.—Cogswell Foundry & Machine Co. destroyed.
Westminster, Vt.—The Gage Basket Co., the town's major industrial plt., destroyed.
Richmond, Va.—Colonial Overall Service Laundry bldg. destroyed.
Rosslyn, Va.—The Murphy & Ames Lumber Yard destroyed.
South Bristol, Va.—Whse. occupied by Mitchell-Powers Hardware Co. and Bristol Metal Products Co. damaged.
Warrenton, Va.—Barn on Dunmovin farm destroyed.
Aberdeen, Wash.—Olympic Bakery destroyed.
Dishman, Wash.—Spokane Valley Stables destroyed.
Ferndale, Wash.—Riverside Golf Country Club destroyed. Faulty gas heater.
Spokane, Wash.—Rans Chicken Dinner Inn destroyed. Fuel oil tank explosion.
Spokane, Wash.—Safeway grocery supermarket destroyed.
Wenatchee, Wash.—J. M. Ade Fruit whses. destroyed.
Yakima, Wash.—Strother & Co. grain whse. destroyed and Juester's grocery damaged.
Buckhannon, W. Va.—Buckhannon Builders' Supply Co. bldg. destroyed.
Fairmont, W. Va.—Hirsch Market destroyed.
Holden, W. Va.—Dwelling of James L. Hamilton destroyed.
Burlington, Wis.—Feed mill production and laboratory sections of Murphy Products Co. plt. destroyed.
Ladysmith, Wis.—Unique Theatre bldg. destroyed. Explosion.
Milwaukee, Wis.—Garage of Schwerman Trucking Co. damaged. Explosion.
Rio, Wis.—Walter Kohlwey hardware store and Jack Prietz restaurant destroyed. Defective wiring.

Laramie, Wyo.—U. S. Bureau of Mines sponge iron plt. damaged.
Kodiak, Alaska—Casino Night Club destroyed.
Saint John, N. B.—Garage of Saint John Motors, Ltd., destroyed.
Lower Caraquet, N. B.—Genl. store of W. S. Loggie & Co. and dwelling of store mgr. destroyed.
Corner Brook, Nfld.—Waterfront whse. of A. E. Hickman Co. destroyed.
Amherst, N. S.—St. Regis Hotel and seven business premises damaged.
Brockville, Ont.—River-front business block and apt. bldg. destroyed.
Campbellford, Ont.—Three stores destroyed.
Hearst, Ont.—Drug store of Romeo Burdon, dry goods store owned by R. Chalykoff and apt., in business district, damaged.
Kingston, Ont.—A large business block, including the Mahood bldg., destroyed, and three neighboring businesses on Princess street damaged.
Sarnia, Ont.—Giant tanker Imperial Leduc damaged.
Sarnia, Ont.—Canadian National Railways car repair shop destroyed. Defective wiring.
Streetsville, Ont.—Five apts. in Bently Hardware Store bldg. destroyed.
Thessalon, Ont.—Roxy Grill, unoccupied bldg., gift shop and rooming house damaged.
Toronto, Ont.—Offices of Norman Wade Co. damaged. Spontaneous ignition.
Toronto, Ont.—Four firms at King St. W. and Brant Plt. damaged.
Toronto, Ont.—Macy's Women's Wear Store damaged.
Trenton, Ont.—Local Airport storage hangar at No. 6 repair depot destroyed; three planes damaged.
Montreal, Que.—Reitman's, Inc., Women's Wear Shop, and Gold Regd. Shoe Store destroyed; Empire Shoe Repair Shop, Laura Record Candy Store, Cozy Restaurant and Top Hat Night Club damaged.
Montreal, Que.—Central Hotel and Grill, genl. store, dwelling and two sheds at St. Lazare station, 32 miles northward, destroyed.

Fire Service Ladders

(*Continued from page 24*)

face forward, grasp the third rung with palms to rear, while the butt man keeps both feet on the heel, while grasping the second rung.

In the illustration of this evolution (Fig. 11), the fly section is shown on top of the main section. The same procedure would be followed were the fly below the main section. In either case, after the ladder is elevated perpendicularly, it must be shifted or pivoted, to bring its beams parallel to the building against which it will be set.

Fig. 12 shows men raising the trussed wood ladder, with butt man leaning far back, keeping his heels on the beams. Men push up with hands on beams, not rungs, arms held as straight as possible.

Once the ladder is erect, it is ready to be pivoted so that the fly will be either on the outside, away from the building, or inside—under the main section, to be toward the building.

In the two illustrations, Figs. 13 and 14, the ladder is shown being pivoted. Fig. 13 shows pivoting to bring the fly toward the building, or on the inside, while Fig. 14 shows pivoting to bring the fly outside, or away from the building.

Note that one man heels the ladder, placing one foot on the lowest rung, close against the grounded beam (the one upon which the ladder is being pivoted). One man supports the ladder with both hands on the beam. The other two steady the ladder by it rungs with arms at about on a level with or slightly above the shoulders.

Many instructors prefer to have at least one of the crew watch the top of the ladder during this operation to detect sway. In the Figs. 13 and 14, it will be noted none of the crew are doing so.

After the ladder is pivoted, the fly is elevated as desired, the ladder then set into position and the halyard secured, as previously described in this series.

... HEY CURLEY... YA DON'T HAVE TO THAW OUT THAT EXTINGUISHER... IT WON'T FREEZE!

You needn't worry about high or low temperature extremes with Ansul Dry Chemical Fire Extinguishers. All Ansul Extinguishers are tested and approved for –40°F operation. Special Low Temperature models are available for –65°F conditions. These same extinguishers can withstand prolonged exposure to temperatures up to 160° above zero. Think of the savings these features give you! No heated cabinets. No freezing of unprotected extinguishers left outdoors in winter weather. No accidental discharge due to exposure to high temperatures in a boiler room, etc. Still Ansul gives you the best fire protection money can buy.

SEE PAGE 43

For Quick Starting Try a HALE FZZ

The FZZ will supply from draft 60 GPM at 90 lbs. and 150 GPM at 30 lbs. Easy and quick-starting in all kinds of weather.

Users are pleased with the quick-starting ability of the Hale type FZZ Portable Pumping Unit — an especially valuable feature in freezing weather. The 4-cycle, single-cylinder, 8¼ H.P. engine ensures ease and speed in starting . . . and plenty of power to the direct-connected Hale Pump. **Note:** Discharge Adapter available for use with 2½-inch fire hose.

Firefighters are amazed, too, at the pump's efficiency under tough pumping conditions. Letter after letter from users describes the FZZ's pumping abilty to deliver through long lines of hose a volume and pressure they consider remarkable.

Write for FZZ folder. Let us know if your Company wants a demonstration.

HALE FIRE PUMP COMPANY
CONSHOHOCKEN, PA.
FIRE PUMPS IN ALL STANDARD CAPACITIES

OFFICIAL BADGE

Actual Size No. 5822

AND

BUTTON

Actual Size No. 7414

OF YOUR ASSOCIATION

Wear One!

No. 5822
Rolled Gold $8.50—14 Kt. Gold $55.00

No. 7414
Rolled Gold $1.00—14 Kt. Gold $3.50
Plus 20% Federal Tax

Satisfaction or money refunded.

BRAXMAR BADGES

Standard since 1879

JOHN O. VEIT
President

C. G. BRAXMAR CO., Inc.
216 E. 45th Street, New York 17, N. Y.

The WATCH DESK

Overhauling the firemanic news of the day

by ROI B. WOOLLEY

Ten Firemen Beat Engines to Blaze

Newark, N. J., fire fighters are known to be quick "on the bell" but they set some sort of a new record the other day when they beat their own Brothers to a blaze.

Firemen, responding to an alarm for a fire in a play shed at the rear of 47 Read street, arrived to find the fire had been extinguished—by no less than ten of their own fellows, headed by the Chief of Department, who were waiting for 'em with grins and gibes.

The yard in which the shed is located is at the rear of the precinct police station. Waiting for a case to be heard were Fire Chief Burnett, Deputy Fire Chief Sommers and Battalion Chief Hilliard, and seven firemen from the Bureau of Combustibles.

The alarm for the fire was sounded by neighbors, but the flames were visible from inside the courtroom. That was all that was needed! The Brothers, led by the high brass, grabbed all available fire extinguishers and ran to the scene, where they lost no time "stretching in" and attacking the fire. In this operation they were aided by garden hoses commandeered from adjoining houses.

The fire was quickly doused, but Fireman William Hogan was burned on the forehead. The chief reported the cause as children apparently playing with matches.

By the time the "on-shift" crew arrived, the ten officers and firemen were ready to return to court, slightly disheveled and a bit "firebeaten," to testify in the case involving the burning of refuse in a private dump.

C. W. COHEN

* * *

Chalk Up Another for T.V.

Television has its hazards, and its attributes, so far as fire fighters are concerned. Consider the latter, for a change.

We now take you to a downtown fire station in Salt Lake City where Assistant Fire Chief A. Ray Ward is watching a television receiver (not an unusual development in these days of modern fire fighting).

Suddenly, the chief jumps up, grabs his hat, yells at his aide. The two rush out of the station. That's Act I.

Act II—The fire fighters dashed half a block to the television studios of station KSL-TV where attendants, wondering, no doubt, how on earth they had gotten wind of the fire when no alarm had as yet been sent in for it, reported the fire was out. Curtain!

Chief Ward said he saw flames suddenly appear on the stage as he watched the locally produced program, and it was second nature for him to dash for the studio.

Studio employes said a lamp ignited a curtain, causing a blaze which did damage estimated at $100.

A. M. MCDONNELL

* * *

How to "Launder" a Fire (Damp Dry)

In Philadelphia, on November 12, 1951, Mrs. Catherine Amberg and her three children had to flee their home about 7:00 A.M. because of a fire in their cellar.

Mrs. Amberg's screams brought a neighbor, Arthur Nelson, who found himself with very little in the way of fire fighting kit to combat the growing blaze.

Nothing daunted, however, he improvised a pressure hose from a washing machine with which he fought the flames until firemen from Engine 47 at 31st and Grays Ferry ave. arrived and put the professional quietus to the blaze.

It develops that Mrs. Amberg had filled her washer after her husband went to work. She then stirred the furnace fire with a poker and went up stairs. A few minutes later she smelled smoke and upon investigating discovered flames in the cellar, whereupon she grabbed up her three children, asleep upstairs, and ran to a neighbor's who notified the fire department.

Nelson, meanwhile, hurried across the street and saw the smoke seeping from the cellar door. He turned on the washing machine to force water through the rubber hose. By squeezing the hose tightly he managed to develop sufficient pressure to enable him to reach the burning coal bin, the seat of the fire.

Firemen surmised the hot poker had ignited a piece of canvas in the coal bin.

* * *

Hot Time in Terre Haute

There are some days when not a thing goes right. On such days a tiny fire is liable to go completely hay wire. And so it did in Terre Haute on November 12th, last.

The fire broke out in the fuel oil truck of one John Hardis of Linton, Ind. Not of much magnitude in itself at the outset, nevertheless the blaze touched off a chain of events that went something like this: As fire fighters arrived, the 4,000-gallon tanker exploded, knocking down several of the Brothers (fortunately without serious injury to any). Two refrigerator cars on a side-track ignited. Laurel Burdette, of Terre Haute, distracted by the blaze, turned a corner too fast and his big truck upset onto a parked car, in which Mrs. Joe Sipes of Terre Haute was sitting. It didn't do truck or car any good.

Hose and fire trucks, which came from all directions, blocked a New York Central freight train. Conductor Tom Jones, also of Terre Haute, raised such a squawk over the whole turn of events that he was pinched on a charge of interfering with an officer.

Injuries—none serious. Damage—considerable—to property and feelings.

IRVING JOHNSON

* * *

Hot Off the Tape

It was double trouble for Jefferson City, Mo., firemen the other day. Midway in a dash to put out an automobile fire, their own fire truck itself burst into flame. Nothing daunted, however, the Brothers, versed in such matters, stopped, squelched the fire, repaired the short circuit—and went on to knock out the automobile fire too. . . . Firemen of Baltimore hustled to the home of Thomas D'Alesandro Sr. There was a lot of smoke but no fire. Thomas D'Alesandro, Jr.—Mayor of Baltimore—was busy at the time, at City Hall—posing

for pictures in connection with the observance of Fire Prevention Week. (Thanks Rev. Wilson Davis). . . . A false alarm of fire busted up the annual memorial services of the Nyack, N. Y., Fire Department being held at Oak Hill Cemetery. Just as Rev. Harold Thelin, rector of Grace Episcopal Church, had reached the height of his sermon, the alarm sounded for the Nyack Junior-Senior High Schools. Bingo! (Thanks Capt. Paul Babcock) . . . . "Spare our fireman, says the *St. Louis Star-Times*: "Suppose your house caught fire. That extra 10 pounds of weight you've been carrying around might make the difference between gallant rescue — or a horrible black mark against our city firemen." A new approach to an advertisement on diet! . . . (Thanks George Beaumont, H & L 15, L. F. D.) . . . A 12-year-old public school boy of Waterbury, Conn., admitted setting six fires in a local school, three in the basement, two in storerooms and one in a hallway, because the sight of the leaping flames "gave me a happy feeling in the pit of my stomach." Loss about $25,000. (Fire Marshal Eugene A. Legge.)

* * *

Wet Water from West Chester Licks S. D. Sawdust Blaze

Something like a record for long distance fire fighting, and for wet water application on sawdust fires, was established not long ago when a South Dakota sawmill proprietor enlisted the aid of a West Chester, Pa., manufacturer of wet water to "fly" to his aid.

Out in Sturgis, S. D., J. U. Dickson, owner and operator of a sawmill, suddenly discovered there was a fire inside a huge mount of some 500 carloads of sawdust and shavings at his plant.

Origin of the fire, which was discovered during a routine investigation, posed a problem for proprietor Dickson. The latter knew full well what a long and arduous operation would be necessary to fight the smouldering blaze using ordinary extinguishing methods. Using plain water, Mr. Dickson figured that it would be a race to see whether the fire would consume the big pile before the water could penetrate to it—if it ever would—and the pile itself would 'take off' with possible destruction of the entire mill.

At this juncture Mr. Dickson recalled that "wet water" might be the solution to his problem. He remembered one such product by name (a plug for advertising) and checking further, found that it was produced by a company located in West Chester, Pennsylvania (National Foam System, Inc.).

Under the conditions, distance meant little to Dickson, who forthwith wired that manufacturer requesting a shipment sufficiently large to cope with his fire. At the company's plant in West Chester, Pa., the urgent plea received "fire department" action. A special delivery crew was assigned to the job. Cans of the wetting agent were rushed from the warehouse via truck to the Allentown-Bethlehem municipal airport. Soon there after, a four-engine transport was winging its way westward with its precious freight.

As soon as the cargo reached Sturgis, the anxiously waiting sawmill workers quickly mixed up the solution as prescribed by the manufacturer and applied it to the burning sawdust mound—using a fog nozzle and that was the end of the stubborn fire!

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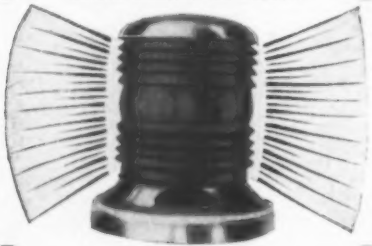

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For Practical Discussion of Current Fire Department and Fire Management Problems

CIVIL DEFENSE—AND GOVERNMENT AID

THE discussion in this Round Table is a continuation of that which appeared in the December issue on government aid for Civil Defense programs.

The generous response from our readers makes it necessary to carry over the discussion to this issue.

Readers are invited to send in their comments on this subject which is described in the box below or on next month's subject which is described in a box on a subsequent page. Address replies to Round Table Editor, FIRE ENGINEERING, 24 West 40th Street, New York 18, N. Y.

Discussion of the Question

Edward Gall, Chief, Mount Vernon, N. Y.: With federal funds denied, the present plans do not call for the purchase of fire apparatus for Civil Defense. Within the past ten years, this department replaced all fire apparatus in service with new equipment, in addition to adding an engine company as reserve.

There is no appropriation of funds by the city for Civil Defense to purchase fire apparatus. If any fire apparatus is to be purchased for this purpose, it will have to be done with local or federal funds.

When both local and federal governments have no funds to appropriate for Civil Defense for additional fire apparatus, and since manufacturers are delayed in turning out apparatus, I do not see what fire departments can do other than use existing equipment.

In the event of fires caused by enemy action which would be beyond the capabilities of this department to control and extinguish, we would have to depend on surrounding communities for aid. This is provided for under the Westchester County Fire Chiefs' Emergency Plan and Civil Defense.

There is no question in my mind that additional fire apparatus is needed by all departments for Civil Defense. Whether this apparatus is to be used in a pool assignment or allotted to individual departments is a question that the fire service would have to decide on. Until such time that both local and federal governments can provide the necessary funds, departments will have to depend on their existing equipment.

F. W. Lange, Chief, East Cleveland, Ohio: At the present time, East Cleveland is cooperating on a county-wide plan for fire defense. Any plan for additional apparatus will depend upon the decisions of the county planning committee. This is similar to the general program which was used during World War II.

Our funds for Civil Defense are necessarily limited, and it would be difficult for us to finance any substantial supplementation to our fire apparatus. On the other hand, there is no question in my mind that additional apparatus throughout the country would be essential to adequately cope with atomic attack.

J. P. Newark, Chief, Grand Forks, N. D.: We recently purchased a new fire truck which will be used for Civil Defense as well as for regular work. At present, we are still very much interested in Civil Defense, but we do not have funds available for purchasing any new equipment. We think that we are quite well off as far as equipment is concerned because most of our apparatus is new since the war.

Michael H. Lotz, Chief Engineer, Baltimore, Md.: We do not contemplate purchasing apparatus exclusively for Civil Defense but only for normal peacetime replacement and for new companies to be placed in service.

The Baltimore Fire Department does not count on federal aid for the

HERE IS THE TOPIC

Now that federal funds have been made unavailable indefinitely for joint purchase of fire apparatus for civil defense use, many municipalities are embarking on their own programs without counting on federal aid.

1. **What is your present plan with respect to fire apparatus purchase for civil defense as well as peacetime use?**
2. **Is your city going ahead "on its own," or does it plan to wait, in the hope that Congress will ultimately vote funds for joint purchase of fire apparatus?**
3. **In the event that Congress continues to turn down appropriation requests from Federal Civil Defense Administration for five apparatus, will your fire department find itself in a difficult position in view of the fact that fire apparatus builders are seriously delayed in turning out apparatus today?**

purchase of apparatus at the present time. Two new pumpers were recently delivered and two aerial ladder trucks are on order.

Apparatus deliveries are already seriously delayed. A new house for an engine and truck company was completed some time ago, and the truck company was placed in service. It is using a reserve truck, due to indefinite delivery date for new aerial truck. Another new house is rapidly approaching completion and aerial truck for same is on order, but delivery date is uncertain.

William D. Thomas, Chief, Binghamton, N. Y.: Present plans are to purchase and replace (old equipment) at least one piece of fire apparatus a year to be used for both Civil Defense and peacetime use.

In all probability Binghamton would find itself in a difficult position if the refusal of Congress to appropriate funds were to continue over a long period, since additional losses or wear on some of our older equipment would call for replacement.

Zephrin F. Drouin, Chief, Lewiston, Me.: We have requested our City Fathers for one additional pumper. This is to be a 700-gallon tank truck. I am in hopes of having the purchase put through this coming year. There is a definite need for it here because of the strategic location of the major air bases here in Maine. This piece of equipment will also make us meet the requirements of the National Board of Fire Underwriters, thereby serving dual needs of Civil Defense and our city's fire protection requirements.

Our city will go along with our recommendation, if it can find the necessary funds through a bond issue.

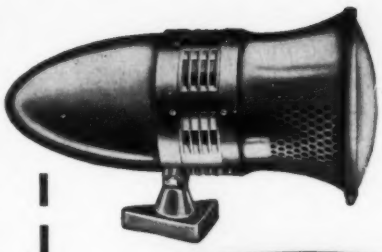
I believe delay in the necessary fire protection is a serious hindrance to fire chiefs. Fire storms of Europe proved costly to England and Germany during the blitz. The advent of atomic warfare should broaden the vision of our federal leaders and those of our state and municipal officials. Complacency is dangerous for the defense of any country. Salesmanship will be required to influence our Board of Finance on the need of this tank truck, so I have asked the National Board to submit to me a recent copy of their recommendations which will be published in the local papers.

Bernard J. Padgett, Chief, Alexandria, Va.: We have no plans to purchase fire apparatus for Civil Defense. I just have to go along with the belief that some members of Congress surely will know our needs ahead of critical times.

We have set up a mutual aid plan in Northern Virginia (that is for the Metropolitan Area of Washington, D. C.), and we plan to utilize what we have, regardless of what may happen. If equipment was made available by the Federal Government, I would not request any more than we have personnel to handle.

I believe that a good mutual aid agreement is better than too much equipment.

John C. Cost, Chief Engineer, Philadelphia, Pa.: With the approval of Director of Public Safety Samuel H. Rosenberg, I have submitted to the City Council a request for twenty additional combination cars with booster pumps to supplement our present



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quota of apparatus. This is in addition to one new aerial truck.

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We are very fortunate in having every company equipped with new apparatus and other equipment which has been purchased in the last three years or so. This includes our three Diesel operated fire boats.

Donald J. Kelley, Chief, Burlington, Vt.: We are now waiting for the National Board of Fire Underwriters to inspect the city for better insurance rates. Whatever they recommend as far as fire apparatus is concerned, we will try to bond the city next March for the equipment. After all, it is the people who should see that they have good fire insurance rates.

For other equipment, we will wait for Congress.

If Congress does not appropriate money for apparatus and bombs falls, every city will be short of apparatus. I am for Congress appropriating money for apparatus and storing it in depots throughout the country.

Walter G. Strickfaden, Chief, Division of Fire, Columbus, Ohio: We have made no plans for the purchase of civil defense apparatus. However, we have over a period of the last four or five years purchased one or two pieces to replace first line apparatus.

We are not depending on any funds from the Government to purchase apparatus.

In our department when we purchase a new piece of equipment, we place it in the first line assignment and we retire the old piece to second line equipment to be used in case of a large fire and to fill in when the off-unit is called in to duty. The off-duty men man this equipment that has become a part of the supplementary department.

At the present time our first line equipment is in good shape and we do not have too much to worry about in that respect.

We have at the present time apparatus on order, which, in turn, will replace older equipment.

John J. Nelligan, Chief, Bangor, Me.: We are not waiting for Congress to vote any federal funds to purchase equipment. We have in our 1952 budget a 750-gallon pumper with a 500 or 600-gallon tank.

Peter C. Kenny, Sr., Chief, Bayonne, N. J.: We have gone ahead with respect to fire apparatus purchase for Civil Defense as well as peacetime use.

We have made a list of needed apparatus and other items that in my judgment are needed in our department. This list was made up with the idea in mind that Civil Defense would come to the aid of all cities in areas such as ours.

O. E. Boegess, Chief, Charleston, W. Va.: As of this date, we have no plan for purchasing Civil Defense equipment.

G. R. McAlpine, Chief, Oklahoma City, Okla.: Our city and the neighboring cities in this area are not financially able to provide standby fire equipment or fire equipment to be used for training auxiliary firemen.

Secondly, it has been my experience that to organize a group of men into Civil Defense programs, we must be

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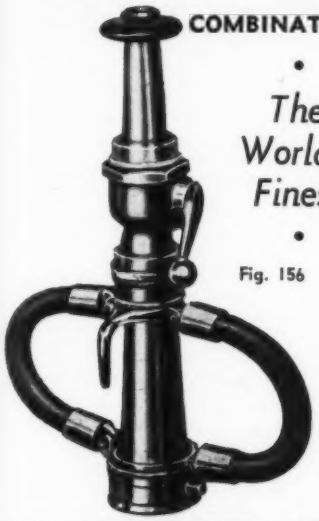

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able to show need for such an organization and we must furnish equipment and instructors for training.

Third, this group of volunteers must have specified assignments, training periods and standby equipment for which they can feel responsible during any emergency.

Fourth, all of this in connection with organization and training of volunteers we cannot do with the equipment we have, for the reason that most of our equipment is first line equipment in service responding to fires in designated areas. To take this equipment out of service for long periods of training would present a problem.

The Federal, State and local governments all turn to the fire chief to ask him to play a large role in Civil Defense. The chief accepts this responsibility and immediately finds himself without the proper tools. Yes, he has trained personnel; he has fire equipment sufficient to control most fires in his community, but he is unable to pull fire apparatus out of service for training groups of volunteers.

What have we done about Civil Defense? We have provided competent instructors for fire protection and fire control; we have provided training areas and sufficient light tools.

On plant protection we have provided a complete visual demonstration for industrial and business concerns. We have provided and trained sufficient personnel for the plant protection program. We have carried this program to more than 100 businesses and industrial plants in our city.

Insofar as public warning is concerned, we have established locations for the devices provided, and have made provisions for the control and maintenance of the air raid warning devices.

On mutual aid we have carefully catalogued all fire equipment within a radius of forty miles of our city and have provided the adapters for use in the event of a major disaster. We have arranged mutual aid centers and pilots in case of a disaster.

All of this has been done at little expense to our local government, but we find that is practically impossible for our city government to furnish the necessary equipment to provide for a well rounded and trained auxiliary fire department.

In one extreme case we were asked to loan a fire engine to a military installation in the community. We loaned the apparatus and the Federal Government is furnishing the personnel. This, of course, is an extreme case, but nevertheless, it is an example of some of the demands made upon the local government.

It appears to me that cities classed as target areas, due to military establishments and defense plant operations, are of such importance to the defense efforts that consideration should be given these areas by the Federal Government to the extent of providing the necessary standby equipment for training and extreme emergencies.

Our plan is to provide the best protection we can for our community, but we are not financially able to provide the necessary standby equipment.

Should Congress fail to provide the funds for Civil Defense apparatus, we

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will find ourselves short of the necessary equipment during any major disaster. We know by experience that lack of various materials will cause considerable delay in the fire apparatus industry.

If the Federal Government is not familiar with the load the local government is carrying, they should check into these matters.

The local fire chief is a practical man, willing to give his all for his government, but his ability to serve his government local community depends on placing the facilities at his command.

C. A. Crosier, Chief, Battle Creek, Mich.: Although no definite policy has been established by the city, it is apparent that we will have to carry the burden of purchasing fire apparatus for Civil Defense.

In the event that Congress continues to turn down appropriations for apparatus for Civil Defense, we might find ourselves in a difficult position, but we have some reserve apparatus.

F. H. Lausch, Chief, Colorado Springs, Colo.: All equipment is being brought up to date. Three new pieces of equipment have been purchased within the last two years.

At the present time no provision has been made for any extra equipment for Civil Defense, but all old equipment which is replaced, is held in reserve.

This department will be in very good shape as far as equipment in service is concerned, but any delay in getting extra equipment for Civil Defense will be serious.

Thomas H. Shipman, Chief, New London, Conn.: New London, with its many Navy, Coast Guard, Submarine ship yards, air fields, Navy laboratories, etc., is a target city of prime importance to any foreign government and is subject to bombing by sea as well as by air. With this in mind, New London has set up its needs for protection and has been waiting for some move on the part of the Federal Government in supplying, as in the last war, or assisting us in obtaining sufficient apparatus for the proper protection of this area.

It seems to be the plan of our city to wait for definite action by the Federal and State Governments before going ahead on its own. I believe a definite statement by the Federal and State Governments on just what they intend to furnish and what they expect the cities to furnish would clear up many conflicting statements and the towns and cities would then go ahead and buy whatever they were to furnish.

Due to the fact that we are barely able to supply our peacetime needs in fire apparatus, we would most certainly find ourselves in a serious condition if an emergency should occur, due to the delay in the manufacturers turning out apparatus.

Clyde Dunn, Chief, Omaha, Neb.: We are making no special effort with regard to the purchase of fire apparatus for Civil Defense. Our normal routine purchases are being made.

Fortunately we are very well equipped, with a majority of new apparatus on hand.

J. F. Finnegan, Chief, Richmond, Va.: We are going ahead with our purchases to cover peacetime use, not including Civil Defense use.

The city is not going ahead "on its own," insofar as Civil Defense apparatus is concerned, and we are in hopes that Congress will eventually allow for the purchase of this apparatus.

We will be in very good shape in the event that we do not have war, or have to use Civil Defense apparatus. In the event of war or attack, we will be in a difficult position as our peace-

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FIRE APPARATUS SALESMAN

One of the largest and oldest Fire Apparatus Manufacturers is anxious to receive applications from interested parties. Please answer in full, listing experience in this field. All replies held strictly confidential. Box 280, c/o FIRE ENGINEERING, 24 West 40th St., New York 18, N. Y.

POSITION WANTED

In Fire and Police alarm system in Southwestern section of the United States. Capable of installation, maintenance, and repair of system, also hold FCC radiotelephone license. 10 years' experience. Good reference. Box 285, c/o FIRE ENGINEERING, 24 W. 40th St., New York 18, N. Y.

FOR SALE
FIRE TRUCK

1½ Ton Chevrolet 500 Gallon Pumper, Hardie High Pressure Pump, 1,000 pounds pressure, 3 Reels, 500 ft. new High Pressure Hose, A-1 condition.

M. F. JENNINGS,
Maury City, Tenn.

FOR SALE

1930 Brockway Hose Wagon, two 30-Gallon Booster Tanks CO2 Activated, Reel, Ladders, etc. Newly painted, in good condition.

CENTERPORT FIRE DISTRICT
Centerport, L. I., N. Y.

Over 300 models to choose from!
We're referring to the "U.S." line, of course. Over 300 Electric Plant models to choose from! "U.S." builds units from ½ to 150 kw, AC and DC. Backed by 60 years of manufacturing experience.
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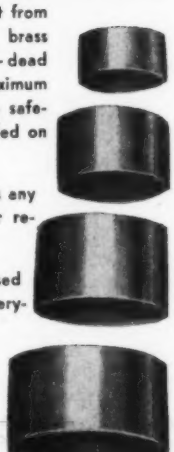
U.S.
UNITED STATES MOTORS CORPORATION
OSHKOSH, WISCONSIN

BRASS EXPANSION RINGS FOR FIRE HOSE

BELL-PIHL rings are cut from seamless drawn yellow brass tubing fully annealed — dead soft — allowing for maximum expansion with complete safety. Each ring well rounded on both ends—no burrs.

BELL-PIHL will cut rings any special size to suit your requirements.

BELL-PIHL rings are used by fire departments everywhere.



SIZES CARRIED IN STOCK FROM ½" OD TO 6" OD IN ANY LENGTH REQUIRED.

Write for Price List

BELL-PIHL COMPANY
17 Wyman St., Arlington, Mass.

HERE IS THE TOPIC FOR THE NEXT ISSUE

1. **Have you found that the fire department, in recent years, has been called upon for help in emergencies which formerly were considered the work of other organizations?**
2. **Has it been necessary to add special tools or equipment to handle similar emergencies should they occur? What Equipment?**
3. **Do you believe the fire department should lend its help where emergencies have nothing to do with fire protection, or fire fighting? If so, why? If not, why?**

time requirements will not cover the the city in the event of an attack.

F. R. Dimond, Chief, Hutchinson, Kans.: We have no plan to purchase apparatus for Civil Defense use, except to furnish apparatus now on hand.

In time, the handicap of production and supply of fire apparatus will possibly hurt us, but we are going ahead with our plan on a local basis in cooperation with our state program.

Henry G. Thomas, Chief, Hartford, Conn.: Our present plan for purchasing new apparatus is strictly a replacement program and has no bearing whatsoever on our possible needs for Civil Defense. Our replacement program has as its objective, the orderly replacement of all apparatus, and incidentally, all equipment used in the fire service.

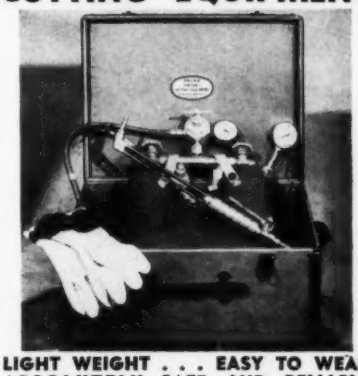
Our city is going ahead "on its own" insofar as the purchase of needed replacement equipment is concerned. However, it is our opinion that if the Federal Government deems it necessary to provide the major increase for fire fighting apparatus in so-called "target areas" then the Federal Government should be prepared to pay the cost. We think that the protection of our city, a part of the United States, against enemy attack remains the responsibility of our Federal Government.

In the event that Congress continues to turn down sound appropriation requests from FCDA and fire apparatus or any other equipment needed for the protection of our civil population, neither our city, or any other municipality, will be able to finance the purchasing of fire apparatus or other equipment in sufficient quantity to adequately protect our city against enemy attack.

Steve Taylor, Chief, Boise, Ida.: We plan to purchase as much Civil Defense equipment as our our budget will permit.

For normal operation we are fairly well equipped, but in a state of emergency we will find ourselves in a difficult position.

PacKo EMERGENCY CUTTING EQUIPMENT



LIGHT WEIGHT . . . EASY TO WEAR. ABSOLUTELY SAFE AND RELIABLE.

PACKO Emergency Cutting Equipment will be found invaluable. It will enable you to cut away steel barriers in a few minutes . . . enable you to get to the source of a fire quickly . . . enable you to make a rescue . . . that by any other method would require hours.

The unit is self-contained . . . complete with pressure proved cylinders, regulators, hose and non-backfire cutting torch. Order a set today. Carried by leading fire departments in the country.

The WELDERS SERVICE CO., Inc.
229 Blvd. of Allies, Pittsburgh 22, Pa.

Janesville
TURN OUT SUITS
Give
RUGGED SERVICE

Make your next coat "Janesville" and specify "Scotchlite" trim. Either rubber or duck coats are available with "Scotchlite" trim for your protection.

THERE MUST BE A REASON WHY SO MANY FIREMEN INSIST ON "JANESVILLE" QUALITY

We Welcome Your Inquiry

Janesville APPAREL CO.
JANESVILLE, WISCONSIN

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CUSTOM-BUILT
FIRE APPARATUS

MULTI-STAGE
CENTRIFUGAL
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HIGH OUTPUT
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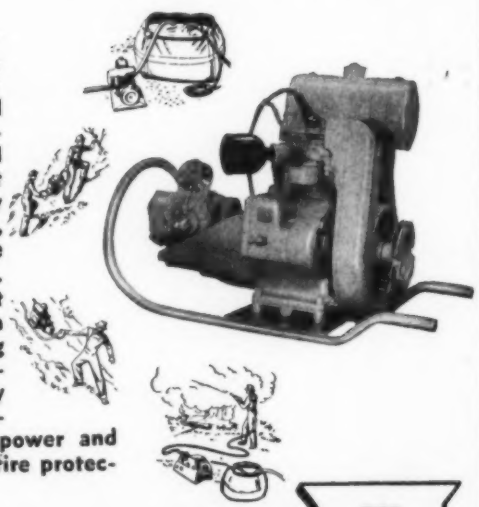
OREN ROANOKE CORP.
ROANOKE 16, VIRGINIA

PACIFIC PUMPERS

AMERICA'S NO. 1 PORTABLE FIRE-FIGHTERS

The sure-starting WA-7, newest of the famous Pacific Pumpers and already an outstanding success in both private and public forest use, is light enough to be carried by hand to source of water, booster tank location, or fire area. It delivers 22 g.p.m. at 50 p.s.i. or 14 g.p.m. at 300 p.s.i., throws a high pressure fog for smothering tactics. Self-priming, positive displacement rotary pump, driven by 4-cycle air-cooled engine, gives you power and portability that mean real fire protection over a wide area.



Write for data on complete line of Pacific Pumpers, hose, accessories.

PACIFIC MARINE SUPPLY CO.
SEATTLE 1, WASHINGTON

FIRE EQUIPMENT DIVISION

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Those Who Know Insist On HANNAY HOSE REELS

The Minonk, Illinois, Fire Department's new Ford Fire Truck, made by the Boyer Fire Apparatus Co., Logansport, Indiana, and equipped with the new Hannay Hose Reels.

Check the Superior Advantages

HANNAY ELECTRIC DRIVE HOSE REELS

Water Resistant
Vapor Resistant
Explosion-Proof

- ★ Have strong construction to withstand high pressures.
- ★ Explosion-proof, heavy duty motor protected against fog, foam, fumes and water.
- ★ Sealed push button control.
- ★ Safe rewind speed, always under control.
- ★ Quiet, positive sprocket and chain drive; no gears to shift, no clutch to engage.

....LOOK FOR THIS

The continuing and increasing approval of Hannay Hose Reels by leading manufacturers and major fire departments is sound evidence of their superiority. Progressive fire officials, of large municipal departments and volunteer companies alike, know that when the going is tough there's no time for mechanical upsets . . . and that HANNAY Hose Reels can always be depended upon to do *their* part of the job. Attention to details makes for perfection. Specifying HANNAY Hose Reels is a detail that warrants your fullest consideration.

Ask Your Supplier or Write for Full Details

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HOSE REELS
CLIFFORD B. HANNAY & SON, INC.
WESTERLO, NEW YORK

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MANUFACTURERS OF MANUAL AND POWER OPERATED HOSE REELS FOR EVERY PURPOSE

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Like so many other progressive, safety-minded communities, Ossining, New York, chooses an FWD because of the added safety and protection it offers. Here is Ossining's Model F-1000T equipped as follows: pump — 1000 g.p.m. at 150lb. pressure — 2 stage. 250 gal. booster tank, 200 ft. capacity hose reel, 100 ft. — 1" booster hose, 2-10 ft. lengths 2½" hard rubber suction hose. Two-way radio. Hose compartment holds 1200 ft. of 2½" hose — 400 ft. of 1½" hose. 3-way deluge gun mounted above pump on diamond plate platform.

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Traffic experts know that FWD four-wheel-drive traction means less time on the run *and far less danger for crews, equipment and other vehicles.* Equally important—FWD engineering also delivers extra action and dependability at the blaze. Write for full facts on this exclusive combination of advantages.

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Start faster. Positive control permits greater speed. Avoid collisions because 4-wheel-drive assures superior steering.

REACH OUT-OF-THE-WAY HYDRANTS

Get through to water supply in hard-to-reach sections. Drive over terrain that stops the conventional fire truck.

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With front wheels pulling and back wheels pushing —drive swiftly, safely over icy or snow-blocked streets and roads.

STEEP GRADES, MUD, SAND NO OBSTACLE

Drive hub deep through sand or mud. Pull up steep, slippery grades without losing speed. Save precious minutes.

Built by the Makers of America's Foremost Heavy-Duty Trucks

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